AMERICAN GAS ASSOCIATION MONTHLY

Vol. VII No. 1

JANUARY, 1925

"THE NEXT five years hold more for the public utility industry than the past twenty"

—Clare N. Stannard
Public Service Company of Colorado

"The Story of Gas"

is a booklet of 68 pages embodying, as the title would imply, the extremely interesting story of the history, development, present status, and future possibilities of the gas industry. The booklet was very carefully edited and printed under the supervision of the Committee on Education of Gas Company Employees. Over 15,000 copies have been disposed of, necessitating a second printing. Has your company placed its order? Copies are available at the following prices:

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American Gas Association Monthly

Vol. VII JANUARY, 1925 No. 1

TO OUR Members—Honorary, Individual and Company—we wish to extend our heartiest wishes for the new year just begun. May it be one of successful and fruitful accomplishment for all. And for our part, it is our sincere wish that we may have the privilege and opportunity of serving you throughout 1925.

AMERICAN GAS ASSOCIATION MONTHLY

Vol. VII JANUARY, 1925 No. 1

Executives Comment on Business Outlook for 1925

THE LAST TWO YEARS have been bumper years for the gas and electric utility industries. They have been years of new high records set in financing, customer ownership, sales of both gas and electricity, extension of plant and service facilities, consolidations and everything entering into the more intensive development of domestic, commercial and industrial sales opportunities. The street railway, telephone and railroad industries have not been laggards. They, too, have visioned a new era in the service of the public. The securities of all industries mentioned have shown an imposing increase, and at this writing they are leading the market.

What of 1925? Will it be another year of expansion and of new records? Will customer ownership activities continue at the present rapid pace? Will prosperity be general? Has plant development been too rapid? These and similar questions were recently put to a selected list of executives. The replies received are unanimously optimistic. In every case the information sent to Headquarters confirms authentic data obtained by the newly organized statistical department of the Assocation. Here are the statements, with a minimum of deletions.

Martin Insull, president of the Middle West Utilities Company, which operates in fifteen states, says: "We are looking forward to a steady improvement in general business conditions for the remainder of this year and during 1925. I believe the business of our company during the next eighteen months will be so good that it will entirely digest all expansion programs made during the last three years."

"Reports which come to me from various sections of the country indicate a gradual restoration of business confidence and activity and that men's minds are coming back to normal after the distressingly abnormal conditions growing out of the Great War," says Samuel T. Bodine, president of the United Gas Improvement Company of Philadelphia. "I do not mean by this to express a belief that we will ever again get back to pre-war costs for labor or material," he says, "but I do confidently believe that we are all thinking more sanely and

working more efficiently than for many years past.

"I do not consider the expansion now taking place in the manufactured gas industry to be in any way phenomenal .It is running at about the same compounding percentage which has obtained since the gas men of the country, awakening from their conservatism in the conduct of the commercial department of their business, put into effect modern methods of publicity to tell the public of the many ways in which gas manufactured under improved processes and utilized through improved and more efficient appliances has become a vital factor in domestic comfort and manufacturing economy."

Clare N. Stannard, vice-president and general manager of the Public Service Company of Colorado, predicts that "the next five years hold more for the public utility industry than the past twenty."

"One of the greatest factors contributing to the optimism of the utility interests in this region is the very evident change in the attitude of the people toward all classes of utilities," Mr. Stannard says. "Our customers are complaining less, and there is a minimum of agitation, both due largely to systematic public relations work.

"The demand for good public utility properties in this region and the frequency of sales is indicative of the soundness, prosperity and future progress in the industry."

"New financing on the Pacific Coast in 1925 will equal and probably exceed that required for 1924," F. A. Leach, Jr., vice-president and general manager of the Pacific Gas and Electric Company of San Francisco, reports.

"The gas industry here is growing at a faster ratio than the population, and is more than keeping pace with general business," he says. "This is due to the discovery of new uses for gas, to the more general application of gas to house heating and to the more general use of gas in industry. The leading companies will meet a growth in gas sales of 10 per cent or more during the next year."

Horace H. Clark of the Peoples Gas Light and Coke Company of Chicago says: "The future growth of the gas industry will be limited only by the amount of new capital we can get to enlarge our facilities to serve the needs of our customers. The gas companies of the United States, in the communities in which they are now serving, are doing about fifty per cent of the possible domestic business; about one-tenth of one per cent of the house heating business where gas is the only means of heating; they are doing about seventy per cent of the commercial business, such as hotels, restaurants, newspapers and bakeries; and only ten per cent of the large industrial business."

T. H. Dillon, Professor of Public Utility Management of the Harvard Business School, reports:

"The outlook for the gas and electric utilities can be estimated from recent growth in the past and the certain demands for expansion already in prospect. Both the gas and electric business have doubled within the past five years and there is every reason to expect that they will again double within the next six or seven years. The annual requirements for new capital during the next few years is estimated at somewhat less than half a billion for gas and somewhat more than half a billion for electric light and power.

"The problem before these utilities is that of rendering a maximum of service at a minimum of cost. This involves not only the development of new equipment and new processes but also the

extension of service to new uses and new customers in such a manner as to smooth out the loads and obtain the greatest possible utilization of plant investments. Some progress has already been made but as yet the surface is hardly scratched. In the gas utilities the obvious line of attack is in domestic and industrial heating and in the production of by-products so as to get the real values per pound of coal and eliminate the present waste in coal consumption."

Stone & Webster, Inc., of Boston, operators of a long line of public service companies, report:

"In general, public utilities should continue to expand. Evidence of this is found in the fact that the individual customer's use of their services increases year by year. In other words, assuming no increase in population and no increase in number of customers, gas and electric companies will still find it necessary to expand by substantial amounts each year to care for demands made upon them. The load saturation point is too far distant to permit of computation now, even though new uses should not be discovered in the meantime.

"Increasing popularity of public utility securities is very largely a reflection of the rapidly growing appreciation of the soundness and integrity of the management and of the financial structure of the organizations behind them, as demonstrated during the war when, without adequate relief from conditions which other industries found intolerable, the utilities weathered the storm better than did most of them."

"The great future of the gas business lies in the industrial sales," says R. Schaddelee, vice-president and general manager of the United Light and Power Company, Grand Rapids, Mich.

"The gas business now is on a more stable basis than it ever has been. The outlook for the next year we consider excellent. In every way we are optimistic and sanguine as to the gas business of our subsidiary companies for the coming year and we are satisfied that the general industrial prosperity, which we anticipate will exist throughout the country next year, will be reflected in substantial increases in both the gross and net earnings."

J. J. O'Brien, president of H. M. Byllesby & Company, Chicago, says:

"There is in some quarters a growing feeling that the effect of the radical sentiment that may exist upon the current upward movement can easily be given too much weight. Reports from numerous localities indicate that the movement of business activity over the rest of the year should, in the main, be upward.

"To what extent this trend will be affected by the coming election is not entirely clear. There are indications here and there that some new projects may be held up and certain purchases deferred until the position of the public upon the more radical issues can be better determined.

"The trend towards consolidation of public utilities by holding and management companies will continue as long as better service at lower cost can be obtained under large scale operations than under smaller scale ones. Experience has demonstrated that such utilities, excepting perhaps those serving the largest cities, can be operated more effectively and more economically by a management company operating on a large scale than is the case when they stand alone and without any such connection. This tendency is in conformity with natural or economic laws and is so well

fixed that it cannot be long disturbed even by drastic legislation and unwise business practice."

Thomas N. McCarter, president of the Public Service Electric and Gas Company of New Jersey, reports:

"Both in the case of sales and new customers our records show a healthy condition. The volume of increase in send-out during 1923 was the largest in our history, while we took on more new customers than ever before in a single year. Yet, in spite of the slowing down of industry during the present year, records for the first eight months of 1924 show over the same period of 1923 a slightly greater increase in volume of gas sales and a very decided increase in the number of new customers.

"I can see no reason why the same condition should not continue to prevail during the coming months. Our experience is that the per capita use of gas is growing larger all the time, owing both to industrial installations and greater domestic use. Moreover, in our territory, population is growing rapidly and new dwellings built to accommodate the increase are practically all equipped with gas appliances, while gas ranges and water heaters are being placed in many homes never before so equipped."

"Both the idea of customer ownership and the securities of public utility companies are growing in popularity," according to Percy H. Whiting of Henry L. Doherty and Company, New York, managers of the Cities Service Company. "Many companies, including even those which are growing rapidly, have found that they can produce over half of the money they need, both for new financing and for refinancing, through customer ownership sales.

"A saturation point for customer ownership is unthinkable. To reach it, every customer of a company would have to place every cent of his investment money in the securities of the utility—which is a condition that is neither desirable nor attainable. The company that has been selling longest continuously on a customer ownership basis will serve more in 1925 than ever before."

Commenting upon business conditions in the Southwest, C. E. Calder, president of the Texas Power and Light Company and the Dallas Power and Light Company, says: "Marked improvement is to be noted generally in the public utility situation in the Southwest as compared with a year ago. The outlook for the coming year seems to me to be bright. General business is good. There is a better general understanding of the relation of this industry to the people and to their communities. This better understanding alone is an augury for improved conditions. It is a direct result of broader concepts of service on the part of the utility industry and of the efforts that the industry is making to bring about complete understanding of the fundamentals of the industry as an essential public service."

R. M. Boykin, president of the Puget Sound Power and Light Company, Seattle, Washington, says: "The public utility industry in the Northwestern States was never in a more healthy condition. Loads are growing rapidly due to increasing population and the exploitation of abundant resources. Financially and physically, these properties are in splendid shape. There is a general prosperity in this section that is likely to continue."

Leakage of Gas in Streets

Bulletin No. 4 Accident Prevention Committee

A NUMBER OF ACCIDENTS of a serious nature point out the necessity of taking all reasonable precautions to prevent the escape of gas from mains and its seepage into adjoining premises, manholes, conduits, etc.

While it is manifestly impossible to completely abolish leaks in piping, this can be kept to a minimum by the employment of certain safe practices during construction and by the periodical inspection of those lines where, by reason of unexpected and unfavorable conditions, leaks may possibly develop. This is especially desirable where the road surface is of impervious material; in winter when the ground is frozen; and where heavy road rollers have been used during the repair of resurfacing of streets.

1. Wherever possible all mains should be located at such places and at such depths as to be undisturbed by concentrations of loads on the street surface.

2. No mains of less than six-inch diameter and not laid below maximum frost line should be tapped for any service without using a service sleeve. A swing joint should be used in making service connections to all cast iron mains.

3. All pipes, fittings and "specials" should be carefully inspected before installation to make sure that they are thoroughly clean and are absolutely free from cracks and splits.

4. "Dope" or cement must be used on *all* threaded pipe joints and, on pipes less than 2 inches in diameter, should be applied on male threads only.

5. All joints must be tested carefully with soapsuds, using either air or gas pressure, before being covered.

6. Services temporarily disused, especially those to vacant houses, should be examined at reasonable intervals to make sure that no disturbance has taken place.

7. Gas leaks traced into any house must be followed by an immediate inspection of the adjacent premises to make sure that all places of danger are located and properly ventilated.

8. *Never use matches, candles or any "open" flame or light when investigating gas leaks, or allow any one else to do so.*

9. One man should never work alone on any job where an escape of gas is probable.

10. To prevent possible failures of lines by reason of the movement of the earth through which they pass, the character of the subsoil should be carefully determined before any main is laid and the rigidity of the main proportioned to the stability of the ground.

11. Special precautions must be taken where welded mains of 8 inches or over are laid through built-up areas. No reliance must be placed upon the self-contained shrinking or expanding of any rigid pipe line, except under circumstances which have been proved to be safe. Provision must be made for the effects of stresses due to temperature changes by the installation of suitable expansion couplings at proper intervals.

Artificial Respiration in Electric Shock and Gas Poisoning*

CECIL K. DRINKER, M.D., Boston, Mass.

THOSE OF US who are engaged in such aspects of physiology as bring us in touch with practical problems in respiration are made aware of the fact every day that, not only are persons being overcome in novel and curious ways, but novel and curious remedies are being suggested for their revival. The lectures of Sir Arthur Keith on artificial respiration, delivered in 1909, call attention to the variety of methods used in England since the foundation of the Royal Humane Society in 1774, and these lectures are a commentary on our present day experience. He recounts the vogue of rectal installation of tobacco smoke as a means of resuscitation after drowning. This method received high endorsement. Testimonials from eminent authorities seemed to prove its success. Similarly, a few weeks ago, I was pestered rather persistently to endorse a method of resuscitation which had as its basis an elaborate system of portable bathtubs in which patients could be rapidly subjected to extreme changes in temperature, it being thought that the shock of such changes must result in benefit.

I hear, too, from my friends in the electric light industry of the efficacy of what is called countershock in resuscitation. By this term is meant the sudden forcible jarring of the patient by pounding him on the soles of his feet with the flat of a hatchet, dropping him on the ground, or giving him some severe sensory stimulus which it has been thought must help in starting respiration. I would not have any one think that I mention such examples as this in order to cast disparagement on them. Each person who makes a suggestion of this kind is actuated by a sincere desire to benefit his fellows, and his suggestion should be dealt with either through the use of existing knowledge or by means of experimental trial.

It is not a new thing, then, to see novel proposals for resuscitation, and, in the face of the multiplicity of such proposals, it is not surprising to see certain ingenious pieces of apparatus placed on the market commercially, and supported with ardent vigor and conviction not only by the manufacturers but also by members of the medical profession.

A few years ago, I was made chairman of a commission to examine methods of resuscitation in gas poisoning, and, as this commission closed its work after two years' profitable activity, it was also called on to pass on the general regulations for resuscitation issued by the National Electric Light Association. I had occasion, during the period of the work of the commission, to examine the field problems in resuscitation which must be met. I was appalled at the amount of gas poisoning with which one must deal in a large city. While the great fraction of this poisoning is suicidal, the gas industry cannot and does not evade the fact that it is the cause of many grave accidents, and I can bear testimony to the care and eagerness with which the gas industry has endeavored to meet its responsibility to the public in this matter. Dr. Cannon and I directed an analysis of

*Read before the Seventy-Fifth Annual Session of the American Medical Association, Chicago, 1924.

gas poisoning cases that have occurred in certain of our large cities. We found that gassed individuals were either dead when discovered or were apt to be breathing either rapidly or feebly, depending on the degree of poisoning that existed. Few or none were discovered whose circulation was reasonably intact and whose respiration had ceased or had become so profoundly enfeebled as to be functionally negligible. It was apparent, both from the figures supplied by the gas companies and in the study of hospital cases and police cases, that first-aid crews in gas poisoning, while they required knowledge of artificial respiration to be applied in certain very rare instances, needed a serviceable method for getting oxygen into the lungs and so freeing the system from carbon monoxide with the greatest possible rapidity. In order to accomplish such an end, two courses were open: The patient's breathing might be stimulated so that he would himself take oxygen from an appropriate reservoir; or oxygen might be delivered to him by some sort of pumping device. Drs. Henderson and Haggard, the commission felt, and experience has amply justified this feeling, provided the logical and best method of resuscitation in gassing that has ever been available, by falling into accord with the first alternative and using the 5 per cent carbon dioxide and 95 per cent oxygen mixture.

It was my province to test out the most prominent of the devices then on the market for pumping air or oxygen into patients. Two machines, the lungmotor and the pulmotor, received extensive attention at our hands. Both these devices deliver air or any gas mixture desired through a mask, and it is the general idea that this air reaches the patient's alveoli. It is removed by suction. Inspiration is thus a positive blast; expiration is a somewhat forcible suck. Both machines are arranged so that it seems impossible to do patients much damage by overinflation, and we were confident that this source of accident was negligible. We found, on animals and on ourselves, that by careful adjustment of the mask, and discriminating use of the lungmotor, we could ventilate quite successfully with it, but we believe that adequate and continuous ventilation by the use of the lungmotor or the hand-controlled pulmotor requires the presence of some one expert on respiratory matters. The automatic pulmotor, we found, delivered oxygen and air adequately to the lungs only under extraordinarily favorable conditions, and we are sure that this is a device on which no certain reliance can be placed. It was therefore the general opinion of the commission that devices now available for driving air or oxygen into the lungs by positive pressure were inadequate and unphysiologic.

I trust, and I have reason to feel sure, that the wide publicity given the subject of artificial respiration during the war, and by such organizations as the American Red Cross, the American Gas Association, and now the American Medical Association, will result in teaching individuals and communities that, so far as gas poisoning is concerned, adequate rescue work must come through training in the Schafer method of artificial respiration, supplemented wherever possible, by the oxygen-carbon dioxide inhalation.

In regard to resuscitation from electric shock, the problem is somewhat more simple. Death ensues from cessation of respiration and true asphyxia, the circulation remaining for some moments after respiration ceases; or occasionally respiration continues and the heart muscle fibrillates. This fibrillation is generalized and is fatal. There may be an indefinite number of combinations of these two conditions. When, however,

ventricular fibrillation takes place, it is even doubtful whether, in man, it ever stops. The circumstances surrounding electric accidents make it possible to reach many patients who fall into the first class. These require air, and require air immediately. There is no time to obtain apparatus of any sort, nor is any apparatus called for. The electric light industry and the electric industry in general cannot go too far in educating employees and the public in the Schafer method of artificial respiration and in placing entire reliance on it. Occasionally, individuals appear who require repeated applications of artificial respiration, voluntary breathing starting and stopping most alarmingly. In such persons, it is possible that the oxygen carbon dioxide inhalation may be beneficial. It has, however, been shown that the prone pressure method of artificial respiration will ventilate sufficiently to sustain life over long periods, and there seems no justification for the idea that mechanical devices are called for in such cases.

Conclusion

We witness today the presentation to the public of many strange and some very ingenious suggestions for resuscitation. When we give all these methods a competent analysis, we are reduced to the selection of the prone pressure method of resuscitation as our great reliance for immediate emergency, and we turn to the oxygen-carbon dioxide inhalation method devised by Henderson and Haggard as the physiologic antidote for carbon monoxide asphyxia, and through simple inhalation apparatus practically allow the patient to administer this mixture to himself. It is conceivable that physiologists may some day devise a positive pressure artificial respiration apparatus which, even in comparatively unskilled hands, can be relied on to ventilate the lungs. Our examination of such devices as are now on the market has failed to disclose any that prove to be of value.

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How School Children Are Being Given First Hand Information on Gas at Grand Rapids, Mich.

Mid-Winter Conference at San Francisco

DISCUSSIONS by the leaders of the manufactured gas industry on the most vital problems facing the present and future development of the gas business will constitute the program of the mid-winter conference of the Executive Board and Advisory Council of the American Gas Association at the Palace Hotel, San Francisco, on January 29th and 30th, 1925. Invited guests include some of the best known public utility executives in America, and every section of the country will be represented.

San Francisco was chosen as the meeting place because it affords a splendid opportunity for the officials on the Pacific Coast to meet with their friends from other parts of the country and to enlighten them on the remarkable engineering, commercial and public relations work so successfully sponsored by the Pacific Coast Gas Association.

President Abell will preside at the two-day meeting, and an address will be made by W. E. Creed, president of the Pacific Gas and Electric Company. Some of the more important topics to be discussed are:

Gas Making Methods and Materials
Rates, Rate Schedules and Charges for Gas
Competition
Public Relations
Customer and Employee Ownership of Securities
Safety
Company Group Insurance
Statistics

Henry L. Doherty, of New York, will lead the discussion on gas making methods and materials. R. B. Brown, of Milwaukee and W. G. Vincent, of the Pacific Gas and Electric Company, have been invited by the Board to lead the discussion on rates, rate schedules and charges for gas. The general subject of competition will be presented by Henry O. Loebell, of New York, B. J. Mullaney, of Chicago, and A. B. Macbeth and A. B. Day, both of Los Angeles, will lead the discussion on public relations; and Charles A. Munroe, of St. Louis, will present the subject of customer and employee ownership of securities.

A number of the subjects assigned for discussion have been sub-divided into related topics, and these in turn will be discussed by men whose official positions in the industry make them admirably qualified to handle the subjects effectively. For example, under the general title of gas making methods and materials, the following topics are to be discussed: Gas reforming, immediate and ultimate supply of oil for gas making, oil gas manufacture on the Pacific Coast and its adaptability further East, complete gasification of coal, low temperature gasification, combination water and coal gas plants, relation of gas rates to securing of industrial gas business, continuous study of gas making methods, etc.

A special committee of the Executive Board appointed to draft the program has included subjects which are of outstanding importance at this time. Definite assignment of topics have been made already and discussions will be carried on by executives who have been notified in advance. Prospects are favorable for one of the most valuable meetings of executives ever held under the auspices of the Association, and it is hoped that the deliberations of the conference will be of direct benefit to the entire industry.

N. T. Sellman Resigns as Assistant Secretary-Manager

Nils T. Sellman

NILS T. SELLMAN tendered his resignation as Assistant Secretary-Manager of the Association to the Executive Board on December 17, to take effect January 1.

Mr. Sellman was born in Sweden in 1890, coming to this country in 1893. After completing his early schooling he entered Stevens Institute of Technology graduating from there in 1913 with the degree of Mechanical Engineer. He then became associated with the gas industry as a member of the engineering staff of the Department of Utilization of the Consolidated Gas Co. of New York.

In 1921 he joined the staff of the American Gas Association as service engineer for which he was particularly qualified and considered as one of the foremost industrial gas engineers in the industry. In October, 1923, Mr. Sellman was appointed assistant secretary-manager, which position he held until his resignation.

On acting on his resignation, the Executive Board said:

"The Board has received and accepts with regret the resignation of Mr. N. T. Sellman as assistant secretary-manager of the American Gas Association. His service of three years and three months had been entirely satisfactory to the Association and he has demonstrated his ability, his loyalty and his power for growth and development. It is a pleasure to agree on our part with Mr. Sellman's statement that his work with the Association has been 'most ideal, cooperation and unified effort having prevailed at all times.'

"The Board particularly desires to record its appreciation of Mr. Sellman's activities in reference to the establishment of an appliance testing laboratory. It is gratifying to know that he desires to continue to be active in this work and that his future employers also wish him to be of any possible service to the Association.

"The Board extends him its best wishes for success and happiness in his new field."

That the Association will not lose entirely his valuable services in connection with the new laboratory is evidenced from the above and from the following quotation from Mr. Sellman's letter of resignation:

"I particularly regret that this step becomes necessary at this time because of my activities and interest in the testing laboratory. I sincerely hope to continue this interest and render whatever service possible to the Association."

Mr. Sellman becomes Engineer of Utilization of the Consolidated Gas Company of New York in direct charge of the Department of Utilization.

Some Changes and Additions to the Association's Headquarters Staff

BECOMING effective January 1, the Executive Board on December 17 appointed Mr. H. W. Hartman assistant secretary-manager of the Association, to fill the vacancy caused by the resignation of Mr. N. T. Sellman.

Mr. Hartman needs no introduction to the Association's membership. He has been a member of the Association's staff as secretary of both the Technical and Accounting Sections since the organization of the A. G. A. He previously served as assistant secretary of the American Gas Institute and before this was connected for several years with the engineering department of the Peoples Gas Light and Coke Company of Chicago.

Also, at this time, we can announce the appointment of Mr. R. L. Burdick as secretary of the Commercial Section.

Mr. Burdick has made merchandising and selling his life's work. He has specialized in the formation and carrying out of sales campaigns, advertising connected therewith and general sales promotion. He is widely known as the author of some forty articles on merchandising and selling which have appeared in "Printers' Ink," "Sales Management," and "Advertising Fortnightly." He is also the author of a text book on trade sales promotion.

Mr. Burdick assumes his new duties on January 1.

Also on this date the Association's Headquarters staff will be augmented by the addition of Mr. J. W. West, Jr., formerly Chief Engineer of the State Corporation Commission, Richmond, Virginia.

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Oversea's Greeting

We are pleased to announce that the American Gas Association was represented at the Luncheon and Autumn general meeting of the Society of British Gas Industries held at the Hotel Victoria, London, November 12th by our Service Engineer, Mr. A. Gordon King, who was the guest of Mr. E. J. Davison of London. On this occasion the President, Mr. D. Milne Watson, was invested with the first presidential badge of the Society, a beautiful piece of silver, gilt and enamel work, the enamel pendant being a reproduction in colors, of the well known "Spirit of Coal" used so widely in the publicity of the Gas Exhibit at the Wembley Exhibition.

Mr. King on behalf of the American Gas Association conveyed to the meeting the greetings and good wishes of the American Gas Industry, and was asked by Mr. J. Wilfred Drake, Chairman of the Council, to bring back to America "hearty greetings from the Society to their brethren across the Atlantic."

Affiliated Association Notes

Pennsylvania Gas Association

The Mid-Year Meeting of the Pennsylvania Gas Association held at the Berkshire Hotel, Reading, Pa., on December 4, 1924 might well be said to have been a memorial meeting to the memory of John H. Keppelman who died in August, 1924. Mr. Keppelman was one of the founders of this Association, a past president, and one of its most ardent supporters. At the time of his death he was President of the Consumers Gas Company of Reading. Frequent reference was made throughout the meeting by President John A. Frick and other speakers of the great loss the Pennsylvania Gas Association suffers in the death of Mr. Keppelman and a resolution on his death was adopted. It was unanimously voted to erect a suitable bronze tablet to his memory in the building of the Consumers Gas Company at Reading.

Mr. H. H. Ganser in his report as Chairman of the Public Relations Committee urged that public irritation be avoided in the apparently ordinary things by such as the careful selection of collectors and meter readers capable of properly representing the company, repair of street openings to as near the original condition as possible, etc. He stated that the manager generally realizes his responsibilities in proper public relations and that it is now a matter of educating the employees, from the bottom up, the necessity of pleasant contact with the public.

Mr. L. W. Selzer presented a paper describing the new Chrisman Down Run Process installed at the plant of the Consumers Gas Company at Reading. Operating results by months since June were shown on a chart. The installation, he stated was made to save generator fuel and has not only done so but has also increased capacity with no increase in labor or maintenance. Extensive discussion added much of interest and value to the subject.

Mr. A. M. Boyd in a paper on "Labor Saving Equipment Available for Distribution Work by Gas Companies" stated that the war caused considerable attention to such equipment and since the War continued attention has been necessary because of our country's attitude on immigration. "Many new uses for air compressor equipments are being developed and the future will, no doubt, provide additional tools for use with these equipments. Considering the general adaptability of air compressor equipments, it is difficult to understand how utility companies doing any quantity of construction work can afford to be without them." He further stated, "A gas company, considering the use of a trenching machine, should have at least five miles of main to lay during an average year and a general character of soil that would permit a machine to be successfully used on at least this amount of trench. The individual main jobs should average at least 200 feet each, as it is doubtful if trenching machine moves can be profitably made for shorter jobs than this. Backfilling machines, which consist of a caterpillar tractor, boom, drag line and scraper, are great labor savers in the refilling of trenches, provided it is not necessary to ram the refill. Do not expect too much saving by the use of labor saving equipment, give thought to the efficiencies and remember that what others are doing can be done by you."

Mr. Joseph Lucena in a paper on "More House Heating" described an alteration of a coal burning hot air furnace to the use of gas and cited the successful results obtained.

Affiliated Association Notes

Mr. H. F. Frey read an interesting paper on Accounting Practice in which he pointed out the necessity of careful selection of mechanical equipment.

The Chairman of the Educational Committee, Mr. W. Griffin Gribbel in his report on "Progress Made with Universities in Reference to Gas Education" reviewed the wonderful work being done at the University of Pennsylvania, Temple University and Pennsylvania State College. He called for volunteers to promote similar work at Lehigh University and Lafayette College.

The meeting adjourned at the end of the morning session to the ball room of the hotel where the members were the guests at luncheon of the Consumers Gas Company.

Mr. J. Arthur Keppelman in an address laid particular stress on proper public relations, which he stated is the subject which should have the most attention in the problems of public utilities.

Mr. Paul E. Fickenscher, Bureau Chief, Rates and Tariffs, Pennsylvania Public Service Commission in an address stated that the present method of regulation favored a company properly operated. In order to answer the question "What is the nature of the most frequent complaint," Mr. Fickenscher made an analysis of 52 informal complaints received during 21 months, an average of one half per company. These complaints were as follows: 1 service charge, 1 minimum charge, 1 pressure, 1 outside light, 2 discounts, 3 deposits, 5 rates, 3 penalties, 8 installations, 11 meters, and 17 extensions. He urged that the gas companies of Pennsylvania file their tariffs in printed form with the Commission.

In an address on "Public Information," Major J. S. S. Richardson gave a report of the activities of the Pennsylvania Public Service Committee and emphasized the necessity of getting more news about the industry before the public, telling methods of getting such news published.

Mr. F. C. Weber in an address emphasized the vast potential field of the gas industry, stating at least three factors are essential to the success of progress toward the attainment of this potential possibility: "1. We must be able to make gas cheap. 2. To make cheap gas we must have flexibility and latitude in standards of quality. 3. To sell this gas at a profit and also protect our investment we must have a scientific and economically correct and second rate structure and schedule, with the commodity charge low enough with other fuels." He further said, "Have you ever taken your city directory and gone through the classified list, and paused for a moment at each one to consider whether or not they are users of fuel, and if so, whether or not they could be secured as customers, even with the existent facilities, if you had the proper form of rate? If you have not done that, and will do so, I believe you will be very much surprised at the results of your consideration."

Canadian Gas Association

Mr. George W. Allen, Secretary and Treasurer, has announced that the Eighteenth Annual Convention of this Association will be held in Quebec, on Wednesday and Thursday, July 15 and 16, 1925. A boat trip will be arranged from Toronto to Quebec for most delegates going via Lake Ontario, Thousand Islands, Rapids of the St. Lawrence River and on to Quebec; special rates will be in force for this trip. This feature was a great success in 1916 and is expected to be so again for the next Convention.

Affiliated Association Notes

Eastern States Gas Conference

Secretary R. A. Koehler has announced that the annual Eastern States Gas Conference will be held on Wednesday and Thursday, April 22 and 23, 1925, in the auditorium of the Public Service Electric & Gas Company building in Newark, N. J. The Committee on Arrangements is developing a most ambitious program which will include two speakers of national prominence at the annual banquet.

New England Association of Gas Engineers

The Annual Convention of this Association will be held at the Biltmore Hotel, Providence, R. I., Wednesday and Thursday, February 18 and 19, 1925. The program as given out by Secretary John S. Tudbury is well diversified and covers several phases of the business. The opening address will be delivered by Robert N. Searle. The following papers will be read: "Gas House Heating in New England" by Charles S. Hilton; representing the Gas Sales Association of New England; "Industrial Gas" by J. W. Howard, representing the Industrial Gas Association of New England; "Distribution Practices" by E. S. Umstead; and "Steam" by C. A. Schlegel. A report on the oil plant at New Bedford will be made by Robert Lindsay. In accord with the usual custom of this Association questions for discussion will be presented and the following have been chosen for the coming meeting:

1. What has further experience in the use of backrun developed as to the results of operation?
2. What do operators using recording calorimeters report as to their advantages in relation to operation?
3. How many companies in New England are using soft coal in their generators, and with what results?
4. What are the advantages of the exhauster type of station meter?
5. What experiences are members having with the use of electric welding?

New Jersey Gas Association

A meeting of the New Jersey Gas Association will be held in the auditorium of the Public Service Electric and Gas Company at Jersey City on Friday, January 23, 1925 at 10 a.m. President Raymond W. Lee will preside. Secretary R. A. Koehler has announced the following program: "Does Direct by Mail Advertising Sell More Gas Than Gas Appliances," speaker to be named; "Keeping Ahead of the Demand in Distribution," Fred A. Lydecker; "The Economies of Merchandising," A. Post; "The Industrial Gas Era," William M. Hepburn; "Why Closer Cooperation Between Gas Companies asd Appliance Manufacturers is Necessary" Henry D. Schall. The Home Economics Department of the Public Service Electric and Gas Company will serve luncheon to all those present.

Pacific Coast Gas Association

About 150 members attended a meeting held in San Francisco on November 20 and 21. A large part of the time was devoted to conference of the Accounting, Commercial and Technical Sections, and to a meeting of the Board of Directors. Very satisfactory progress was made toward the personnel of committees and in assigning problems. The banquet was attended by about 140 members and guests. The next meeting will be held in Los Angeles early in 1925.

GENERAL

CHAIRMEN OF GENERAL COMMITTEES ORGANIZED TO DATE

Amendments to Constitution—Wm. J. Clark, Yonkers, N. Y.
American Engineering Standards Committee Representative on—A. H. Hall, New York, N. Y. —(Alternate Representative) W. J. Serrill, Philadelphia, Pa.
Award of Beal Medal—H. C. Abell, New York, N. Y.
Cooperation with Educational Institutions—W. G. Gribbel, Philadelphia, Pa.
Customer Ownership—Charles A. Munroe, St. Louis, Mo.
Education of Gas Company Employees—B. J. Mullaney, Chicago, Ill.
Finance—James Lawrence, New York, N. Y.
Gas Code—W. R. Addicks, New York, N. Y.
General Specifications—A. H. Hall, New York, N. Y.
Managing Committee of Appliance Testing Laboratory—R. W. Gallagher, Cleveland, Ohio.
National Fire Protection Association—R. S. Doull, New York, N. Y.
Nominating—R. B. Harper, Chicago, Ill.
Representation on National Joint Committee of Public Utility Associations—D. D. Barnum, Boston, Mass.; H. L. Doherty, New York, N. Y.; A. P. Lathrop, New York, N. Y.; P. H. Gadsden, Philadelphia, Pa.; Charles A. Munroe, St. Louis, Mo.; Wm. L. Ransom, New York, N. Y.; Alexander Forward, New York, N. Y.; H. C. Abell, New York, N. Y.; T. V. Purcell, Chicago, Ill.

Report of Customer Ownership Committee

CHARLES A. MUNROE, Chairman

A QUESTIONNAIRE was sent out on August 20th to the member companies asking for the details of the customer ownership work which they had been engaged in for the twelve months ending July 1, 1924.

The answers disclose that relatively few gas companies have become interested in this work. Its importance both from the standpoint of raising capital and from the standpoint of public relations is so generally recognized that a statement of the fact is all that is necessary.

The benefits of customer ownership are ably stated in a pamphlet recently isued by Bonbright & Company, as follows:

1. It offers a compelling reply to municipal ownership agitators because it embodies the most practical form of true public ownership, public ownership under private management.
2. It protects the utility from unwarranted political attacks.
3. It stabilizes the market value of securities by the widest and best sort of distribution.
4. It strengthens the credit position of the utility.
5. It encourages thrift and fosters community spirit.
6. And, finally, it affords the utility company a means of obtaining at a minimum cost a portion of the capital required for extensions to keep pace with the demands of the industry.

Your Committee urges every member company that has not done so to immediately inaugurate a customer ownership campaign.

Statistical data, based on the replies to the questionnaire, is attached as a summary to this report.

A study of this data will give, to anyone interested, the essential details of such work, and the methods used by the reporting companies in selling securities.

Of particular interest along this line is a method used by the Public Service

Corporation of New Jersey. Moving picture films have been taken of various factories using the service of the Public Service Corporation, and permission is obtained to display these films in the factory where the pictures were taken. After the films have been exhibited, a talk on securities is given and an effort made to sell the employees stock. It is reported that considerable success has followed this method.

The Rochester Gas and Electric Corporation has carried the film idea a little further; in some cases they have secured such cooperation that deferred payments on a stock sold have been collected by the owners of the factory and turned over to the company.

Your Committee believes that the company employees should not be used in a stock selling campaign longer than sixty days in any one year, and that if sales are desired beyond the amount that can be disposed of in such a campaign, that the additional sales be effected through a permanent paid force.

We believe that a market should be maintained for the securities sold. This can be accomplished by over-selling the issue; a 10% over-sale should provide an ample market for any resale stock.

Transfers of stock should be expeditiously made and a strict compliance with the legal requirements in regard to stock transferred should not be required from the small stockholder where the facts disclose no attempt to defraud.

Your Committee feels that the acquiring of a large number of stockholders carries with it its responsibilities on the part of the management and that this should not be overlooked. Each company engaging in customer ownership work obtains as stockholders a large number of people who differ in type entirely from its former stockholders. Time and attention must be given as to how to best cultivate this new type of stockholder in order to hold his unswerving interest, and in order to get the greatest good to the company from such stockholders.

Most of the customer ownership movements have gone through a period of rising prices for utility stocks. This opportunity must be taken advantage of by cultivating and educating in a systematic manner the stockholder, in order that he will remain a stockholder in the period of falling market prices.

SUMMARY

Answers to Questionnaires Regarding Customer Ownership Campaign

Period of Campaign—July 1, 1923, to July 1, 1924.

Number of Replies Received up to October 2, 1924 150

Of the replies received, the answers are as follows:

Stock sold by:			
Gas Companies	12		8%
Gas and Electric Companies	35		23⅓%
Total		47	31⅓%
Bonds Sold	1		⅔%
Sales Campaign planned for future	9		6%
No sales made or planned	93		62%
Total replies	150		100%

Of the Gas Companies selling stock			
11 sold	31,611 shares of Preferred to	3,742	Purchasers
1 sold	4,545 shares of Common to	443	Purchasers
Total	36,156	4,185	
Of the Gas and Electric Companies selling stock			
2 sold	19,920 shares of Prior Lien to	2,900	Purchasers
33 sold	546,867 shares of Preferred to	136,570	Purchasers
1 sold	73,918 shares of Common to	8,000	Purchasers
Total	640,705	147,470	
Combined sales of the Gas and of the Gas and Electric Companies			
2 sold	19,920 shares of Prior Lien to	2,900	Purchasers
44 sold	578,478 shares of Preferred to	140,312	Purchasers
2 sold	78,463 shares of Common to	8,443	Purchasers
Total	676,861	151,655	

Total to July 1, 1924	
Of all shares sold under "Customer Ownership" plan	1,517,321
Of all purchasers under "Customer Ownership" plan	291,097
The greatest number of shares sold by one company (The Public Service Company of Northern Illinois) was	76,785
The smallest number of shares sold by one company was	278
The greatest number of purchasers from one company was	25,095
The smallest number of purchasers from one company was	59
The average purchase of stock by one person was	4.6 shares

Par Value	Prior Lien	Preferred	Common
High	$100	$100	$100
Low	$100	$ 25	$ 25

The par value of the great majority of stock sold was $100 per share.
One company sold common stock of No Par Value.

Selling Price	Prior Lien	Preferred	Common
High	$102	$110	$94
Low	$100	$ 25	$32

14 companies sold below par.
6 companies sold above par.
31 companies sold at par.
2 companies sold stock both at par and above.
1 company sold both at par and below.

217,625 shares were sold under the "Deferred Payment" Plan. This amount represents 32% of the total number of shares sold.

The percentage of "Deferred Payment" sales cancelled varies from *none* to 25%.

The majority of companies refund the full amount of payments made, when sales are cancelled; although many do not allow full amount of interest.

Comissions paid range from $.10 to $5 per share, but the greater number of companies paid $2.00 per share. Three companies paid no commission.

The average commission on all stock sold is approximately $2.50 per $100 share.

The cost per share of selling the stock varies from $.33 to $8.00. To the greater number of companies the cost of selling was approximately $5.00 per $100 share.

The Total Amount of Money Raised —$63,450,00.

The Total Value of Securities—$64,-982,00.

Methods used by the various companies in selling:

Employees	27	Bill-Board advertisements	3
Newspaper advertisements	35	Brokers	1
Circulars	17	Stickers on bills	3
Regular full-time salesmen	20	Direct Mail	11
Prizes	8	Novelties	3
Local banks	1	Window Displays	1
House-to-house canvass	1	Posters	6
Booklets	3	Magazines	3
Sales department under man from Securities Department	1	No direct advertising	2

❖ ❖ ❖

The Gas Industry on the Screen

The Rochester Gas and Electric Corporation, Rochester, N. Y., has completed an educational moving picture of its gas and electric departments. Several projections have recently been made in New York and without exception the film has made a deep impression. Following an introduction showing the scope of the company's public service, the picture shifts to "The Story of Manufactured Gas." The plant and processes of manufacture are set forth in detail from the decay in the ground of the forests that made the coal to the cooking, heating and manufacturing accomplished by the customer. Of special interest is the skillful manner in which the passage of air, gas, water and by-products through pipes has been photographed. The film throughout leaves the impression in the minds of those who see it that the public service is uppermost in the thoughts of the management. The gas story is followed by a similar story on electricity.

Mr R. M. Searle, president of the company, gave the project his hearty approval and support. It was executed under the personal direction of Mr. F. W. Fisher, manager of the employment and claim department, assisted by Mr. A. C. Rissberger, assistant manager of the department.

This film will be shown in the schools and to business and civic organizations. There is unanimity of opinion that its educational value will be very great and it is believed that other companies will follow in the trail blazed by the progressive Rochester Corporation.

Getting Behind Our Public Utilities*

B. C. COBB.

WE OFTEN HEAR nowadays—as if it were something new—the statement made that we are in a transition period, that our ideas, opinions and beliefs differ greatly from those we held before the world war.

Our ideas and beliefs have changed to some extent—we learn as we go along—but as for being in a transition period, we have always been in such a period ever since the nation was formed. Only recently a man desirous of the greatest office within our gift—the Presidency of the United States—in a public address said:

"I am opposed by Wall Street, big business, the bootlegger, the corrupt press. These are the crooks and scoundrels who do not want me."

Bunk! And the man who said it knew it was bunk, but he got it off his chest and perhaps no one was hurt very much except the man who said it. The evil part was, however, his intimation that big business, the bootleggers and the press were in league to defeat the people's choice, to throw down their anointed son. A preposterous thought and an impossible thing, and yet at the same time part of a transitory period. Some will applaud and grow boisterous over such doctrine; others with sore spots in their hearts will become more dissatisfied; but the thinking class, the home-owner, the thrifty, will have none of it.

Railroad Virtues Outweigh Faults

The steam railroads of this country have perhaps had more to do with its growth and prosperity than any other thing. Our transportation system, from small beginnings, has become the greatest in the world. They—the railroads and their management—have sinned and been sinned against. There have been stock jobbing and profiteering, rebating and sordid attempts to gain; but had it not been for men of vision, like Commodore Vanderbilt, James J. Hill, Ripley and Harriman, the West would not be what it is today.

Great fortunes were built up by these men of toil and battle, and perchance some things were done not in strict accord with the highest business ethics, but the risks were great, and it required nerve and courage to carry through. Why, then, should not the reward be great?

Our railroad securities are gradually being absorbed by all the people, not only bonds but stocks; and those railroads following out the example set by the electric light and power companies of selling stock to their customers will reap a reward, not only in finding a way to provide new money for construction and expansion, but in having a clientele interested and anxious to safeguard them against unwarranted and unjust attack. Here again we see transition, transition from ownership by the few to ownership by many.

Of one thing the railroads can feel proud, and that is, that there is less water in their securities than in the securities of almost any other great industry of the country. I doubt if there is any water in the securities of the railroads taken as a whole—in fact, I am inclined to think that the valuations set upon them by the

*An article which appeared in the November issue of "The Nation's Business."

Interstate Commerce Commission will exceed the securities outstanding by several billions of dollars.

The electric railways of the country during the past ten years have probably been up against greater obstacles and confronted by more problems than any other form of public utility. This is due, in some measure, to past mismanagement, watered stocks, and failure to provide for depreciation, but to a far greater extent to the expense and cost corollary to the advancement of the business; to old-fashioned and restrictive franchises which limited rates of charge for service rendered without holding down operating costs; to burdensome and unnecessary paving taxation, unfair legislation and political interference; and last, but not least, to motor bus competition and use of privately owned automobiles.

Some companies have gone under, never again to come up; others have been reconstructed to the detriment of their security holders but to the benefit of the communities served; and still others have endured and continued to serve with credit to their management and their patrons. These last are those located where an enlightened public and sane authorities have allowed them to make a compensatory rate of charge for the service rendered.

Increased costs, both labor and materials, brought about by the war, hit the electric railways very hard; but worse still, has been the blow from automobile competition. To say that any such competition should not and must not exist would be foolish. One might as well try to stop the hand of time. To say that such competition, not only competition from motor bus lines operated for profit but also competition from privately owned and operated automobiles, should be regulated, would be wise and for the best interests of all concerned.

Automobiles have come to stay. They have long ceased to be a luxury, and are an absolute necessity. The manufacture and sale of automobiles has become one of our largest basic industries. For it to become involved in financial difficulties and to stop operation would be a disaster.

So, too, would it be a disaster to allow the electric railway industry, with a capital investment of approximately $5,000,000,000, to succumb and be blotted out. The electric railway is not yet a thing of the past. It has served the people well for many years and will continue so to do for many years to come. It is the

NEW YORK'S SKYLINE IN 1876 AND TODAY
The Utilities had more than a large hand in making this change possible

cheapest and most dependable form of transportation known for cities of size and population.

Street Railways Indispensable

No business can succeed unless it earns, and the electric railway business in this respect is no different from any other. The life or death of the electric railway is clearly up to the people themselves. If a community really wants electric railway service, it will have it; but to do so it must pay for it either by a proper fare to a privately operated company or by including the cost in the tax bill under municipal operation.

I am not going to discuss the arguments of privately owned and operated utilities versus those owned and operated by municipalities. I do know, however, that one cannot get something for nothing or long continue to get without giving.

Motor busses cannot supplant the electric railway in towns of any size. They can, however, be used in conjunction with and supplementary to the railway service, not only as feeders but by the establishment of new lines into new territory and by replacing unprofitable lines at times of new street construction.

In 1923, the electric railways carried approximately 16,000,000,000 passengers, or between 600,000,000 and 700,000,000 more passengers than in 1922, the then high water mark of the industry. The larger portion of this gain was made in the big centers of population like New York, Chicago, Philadelphia, Detroit, Baltimore and Boston; still at the same time, increases were shown in the medium and smaller sized cities. This really is a wonderful record when we consider the tremendous automobile competition, and is significant in proving that electric railway service is something we are not yet ready to throw away.

That electric railways have been in a transitory condition during the past ten years is a question I think no one will argue. Prior to 1914, electric railway securities were more sought after than any other form of public utility security except perhaps steam railroad securities. Up to that time, with few exceptions, electric railways had continued year after year to show constant and consistent gains in the number of passengers carried, and net earnings applicable to fixed charges and dividends were ever in the ascendant.

Most Popular Present Securities

Many investment bankers and investors themselves who now turn away when electric railways are mentioned, at that time did the same thing when gas and electric light and power securities were placed upon the counter. I am not saying that their judgment in many instances is not good, but I do say we must not let our fears get the better of our wisdom. An industry which is indispensable must succeed, and success is the foundation stone of our investments.

Gas and electric light and power securities, of all public utility securities, at present hold a commanding place in the investment public's eye. And rightly, for the service rendered by these two giants of the public utility family (water alone not counted) is perhaps the most necessary of all the service rendered by public utility companies.

Gas securities until 1905 perhaps were in the lead, because the gas industry was of greater age. It has been established as a necessary part of our daily life, and its management generally for the period of fifteen years prior to 1905 had been progressive, intelligent and ever ready to serve the people's needs.

Gas during those years became just as necessary for fuel as it had been neces-

SEATTLE IN 1884 AND NOW.

In 1884 Seattle was a small frontier settlement where the housewife cooked the meals over a wood fire and challenged the darkness with tallow candles. Today, thanks to the development of public utilities, the gas range and the electric light have replaced these primitive methods

sary previously for light. Most of the gas companies had been prosperous and regular payers of interest and dividends on bonds and stocks, because of the demand for service and the fact that prices for labor and materials fluctuated little during the period, and also—and an important point—because the margin between the selling price and the cost of producing and marketing was commensurate with the service rendered.

The fact that gas securities have, during the past twenty years of transition, somewhat lost the lead to those issued by electric light and power companies does not, in any way, mean that they have been crowded off the boards.

While the lighting field of gas companies has largely been taken over by the electric companies, their sales for other purposes—fuel for cooking and for the industries—have increased enormously. For example, sales of gas were:

In 1905.....112,440,000,000 cubic feet
In 1915.....204,309,000,000 cubic feet
In 1920.....319,888,000,000 cubic feet
In 1923.....370,000,000,000 cubic feet

This, surely, is proof of the stability of the business and an indication of its possibilities. In addition to all this the advancement of the business and the improvement in manufacturing methods have been more rapid in the past ten years than in any prior twenty-year period.

Since 1905 the growth of the electric light and power companies has been phenomenal. Not only has this growth been in the lighting field, but in the power and industrial field as well. The generation of electricity was:

	Kilowatt hours
In 1902	2,507,000,000
In 1912	11,569,000,000
In 1917	29,650,000,000
In 1922	44,084,000,000
In 1923	51,498,000,000

an astounding record; and it is altogether likely that the record for the next ten years will be equally astounding, for those who know best say that the development of the industry has only just begun.

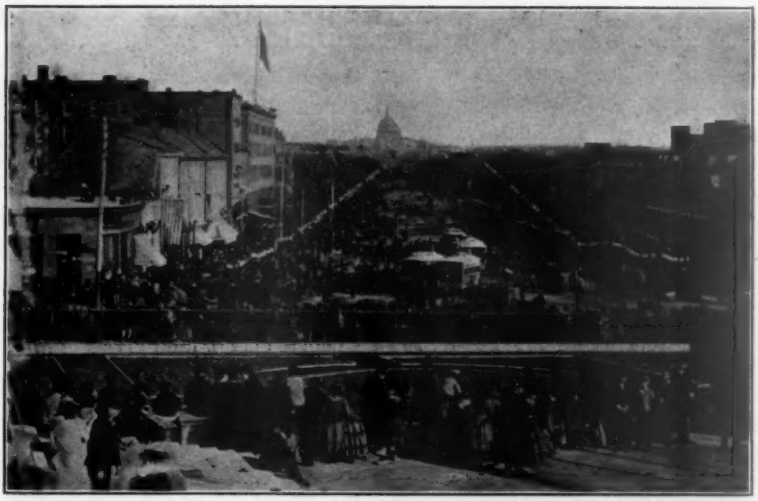
Generally speaking, the securities, wisely selected, of power and light companies are today safer for an investor's money than any other security except government bonds and bonds issued by states and municipalities.

In the first place, the development of the electric power and light business, of all the public utility business, was the last one in the field; and it has, therefore, had the opportunity of profiting by the mistakes of its older brothers. There has not been expansion into unprofitable fields, an unwise policy which caused embarrassment to many traction companies. Men have advanced the business at a tremendous pace by introducing improved methods of generation and transmission. Wasteful and destroying competition has not been so keen, because the people have come to understand that under governmental regulation it is unnecessary in order to procure lower rates.

The Challenge to Socialism

Rates of charge made for service by power and light companies have decreased in the last twenty years to a very marked extent notwithstanding tremendous increased costs of almost everything entering into the production and marketing of electric current. And last, but not least, customer ownership has proved a bulwark against socialism and a very helpful friend in many other ways.

Customer ownership means ownership of the securities of a company by its employees and the people using its service. The customer ownership movement was planned or started a few years ago by some of the power and light com-



WASHINGTON AS SEEN IN CIVIL WAR DAYS AND TODAY

Pennsylvania Ave., in Civil War days, was a towpath for the horses which dragged the street cars. The advent of modern utility services changed all this

panies of California. They needed funds and had other problems, socialistic in their nature, to solve. So they started out to solve them by telling the people what the companies were, what they were doing, what they proposed to do, and ended up by offering them shares of stock in the companies' business.

The movement was successful, and enabled the companies to ward off and defeat the attacks of those who would pull them down. Along with good service, it made disgruntled customers happy; and it raised money, all of which has been expended in the territory of those purchasing the securities, surely a pleasing thing to all concerned. One company—the Southern California Edison Company—has increased the number of its shareholders in this way in a few short years from 3,000 to over 63,000, a remarkable record of which anyone might well feel proud.

The example set by these California companies has been followed by most of the power and light companies of any size in the country, and generally with marked success. Most of the sales are made by employees of the companies, and such sales create a spirit of loyalty in the employee as well as making the customer acquainted with the company in a better, more understandable and direct way.

Add Million New Stockholders

The electric light and power companies have sold during the past few years through this customer ownership movement more than $500,000,000 of stock and at the same time increased their customer ownership stockholders by more than 1,500,000—surely a remarkable and interesting record. I do not know the total number of those owning stock or other securities of our public utility companies, but I do know that the number of stockholders, because of this customer ownership movement is going to increase more rapidly in the future than in the past.

In 1924 it is estimated that stock sold in this way by electric light and power companies will amount to upwards of $350,000,000, which means the adding of 1,000,000 new stockholders.

This is transition and something that is rapidly turning ownership by the few over to ownership by many. It kills the thought of socialism and means that the people will direct and manage through individual ownership and not through government or municipal ownership—generally wasteful and inefficient.

The records show that the average holdings of stock under customer ownership are from three and one-half to four shares per person, and that while the companies selling stock in this way are not averse to selling large blocks to one individual, they prefer greater distribution in small amounts to lesser distribution in large amounts.

Customer ownership of stock, in addition to being of great advantage to the companies and their customers, is also of great advantage to the bondholder—the man who loans his money for a limited length of time at a fixed rate of return—for it builds up an equity behind his bonds that makes them strong and pleasing things for him to look upon.

The steam railroads of the country have distributed their stocks in the amount of $7,250,000,000 to approximately 777,000 stockholders, which means an average of 93 shares per holder. These are imposing figures, but they can be made more imposing if the railroads will adopt the customer ownership plan and sell stock directly to their patrons. It is not beyond reason to think they can increase in this way and in the period of a few years the number of

Broadway and 23d St., New York City, 50 years ago

their shareholders to 3,000,000 and at the same time raise $1,000,000,000 for construction and expansion purposes.

It would mean an average holding of only four or five shares of new stock per individual, it would increase the equity behind their bonds, and it would mean an army of interested stockholders fighting their battles and depositing their ballots on election day against principles and doctrines that would be detrimental to their welfare.

And now we come to super-power, about which many misleading and mythical things have been said and written. Attempts have been made by some to show that the power and light companies of the country are banded together to put this thing across and form a trust to wring from the people dollars which they have earned by dint of hard labor and the sweat of their brow.

It has been said by others that super-power would so cheapen the cost of elec-

Broadway and 23d St., New York City, today

tricity as to cut in two the selling price of current. It has been said that super-power meant the building of all steam power houses in the future at the mouth of coal mines, with consequent savings in cost of production because of no freight rates to pay. It has been said that all of the water powers of the nation would be utilized with further lowering of production costs because of doing away with the necessity of using fuel.

All this makes wonderfully interesting reading; and it excites the imagination; but the cold, hard facts are that super-power means simply interconnected power—the tying together of heretofore separately operated systems, so that when one is short or unable to supply demands made upon its facilities, it can call upon others who may have a surplus.

It is a pleasing picture and an alluring tale to have painted and written for us a story which leads us to hope for and expect much. It is not so pleasant, however, when we find out that what has been told us is not true; and it is wrong by exaggeration to excite the cupidity of those who do not know better.

Super-power may, to some extent, cheapen the cost of production, but

against this cheapening of production cost must be set up the additional cost of long-distance transmission. It is all right to talk about building power houses at the mouth of the coal mines, but to produce power we must have water in tremendous quantities—and water is not always available at the mouth of coal mines. A large steam power house in a large city will use more water than the city itself. Water for condensing purposes is just as important as coal for fuel under the boilers. So is exploded one of the myths about super-power.

Again, while our fancy would harness all the water-power now running to waste, our common sense tells us it is impossible, for many of the water-powers are so far distant from the market in which we sell electricity as to make the cost of transmission prohibitive.

Place for Sugar Bowl Savings

The truth about super-power—and it is only one phase in the development of the electrical industry—is, as I have already said, the joining of heretofore separately operated systems. This means, perhaps, some economies in cost, but to a greater extent it means continuity and reliable service rendered; it means conservation of our resources and the doing away, in many instances, with duplication of investment. It is another illustration of transition and progress. Let us hope that politics, and those seeking self-advancement, will not so surround and restrict its growth by unnecessary legislation as to make impossible the fulfillment of its premise.

One of the greatest evils of the day is tax-exempt securities, and the plague is increasing by leaps and bounds. In 1913 tax-exempt securities outstanding were estimated to equal $4,850,000,000. By January 1, 1924, they amounted to $12,309,000,000, according to estimates made by the secretary of the treasury.

This has meant, since the late war and the consequent high taxes upon large incomes, a running to cover of those who formerly purchased taxable securities in large blocks. It has meant wasteful and extravagant expenditures by states and municipalities. It has driven those who otherwise would have invested their money in industrial enterprises and pursuits which would have employed a host of labor, to put their money into places where its return would not be taken away.

Out of it all, however, has come some good, for it has widened the security market and brought an army of small investors into the taxable security field—those with incomes not affected by high income surtaxes. Here, again, is transition, and once more ownership by many instead of ownership by few.

It is estimated that in this country between $400,000,000 and $500,000,000 in cash is tucked away in sugar bowls and stockings and kept out of circulation and investment. Only education can cure this, and customer ownership is one of the results of such education.

The wealth of this country is said at the present time to equal $320,000,000,000, an enormous sum and accumulated largely in the short space of one hundred and forty years since we became a nation. This means an average annual increment or increase in wealth of $2,300,000,000—figures we can hardly comprehend.

Approximately $40,000,000,000 or one-eighth of this tremendous sum, represents the value of our steam railroads and public utilities. This value is largely in the hands of the people through ownership of securities, for the people either directly and individually hold and own

these securities or are indirectly interested in them because of ownership by savings banks, life insurance companies and trust depositories. In this country today there are upwards of 65,000,000 holders of life, accident and industrial insurance policies. The insurance companies issuing these policies own not only millions but billions of dollars of the securities of railroads and public utility companies. Should anything happen that would weaken or hurt these great servants of the people, it would also hurt the insurance companies and likewise the holders of their policies. Despite the truth of these statements, many policyholders, little realizing what they are doing, will vote for and approve economic and political questions that are inimical to their interests.

Happily, here again, we have transition, for the insurance companies, the railroads and the public utilities are fast learning how to disseminate the truth and educate the people.

We are a great and wonderful people. Blessed by nature with an abundance of natural resources, we have wasted and destroyed. We have saved at the spigot and failed to stop the bunghole. We cry out in alarm because our laws are not observed, and still we keep on passing them. We try to tax the rich, and then open wide the gates of avoidance. We have given suffrage to our women and half of them do not avail themselves of the privilege.

We find fault with our railroad service, forgetting that our transportation system is the greatest in all the world. We complain about our telephones and fail to remember that we have more telephones in one single city than in all the British Isles. We rail at those who grow rich and prosper, forgetting that it is hard work and industry—the desire to do and accomplish, the lure of the game—that has made them prosperous, not the mere desire to accumulate and acquire worldly possessions.

It is all transition and an indication of a thinking people desirous of doing the right when once they know the right.

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"With the Night Mail"

Discussing the Association's use of the United States Air Mail Service to facilitate its correspondence, Colonel Paul Henderson, Second Assistant Postmaster General, writes under date of December 2 as follows:

"I wish you to understand that the constructive action taken by the American Gas Association is deeply appreciated by the Post Office Department."

This Is News!

MOST, IF NOT ALL, of the member companies of the American Gas Association who publish any kind of house organ, bulletin or company magazine are familiar with the news service which is released with more or less regularity by the Publicity and Advertising Section.

Seldom does a company publication reach this office which does not contain one or more items which have originated here. We believe that this service is appreciated.

It may not generally be known, however, that many other uses are made of this material. Among them the following may be listed:

To state committees on public utility information for use in committee bulletins.

To member companies doing cooperative advertising for use in the advertising pages of newspapers carrying such a department.

To magazines and newspapers specifically requesting our service.

To syndicate writers for use or adaptation in syndicated articles.

To gas trade magazines.

To trade and other magazines outside of the gas industry.

This last classification is particularly interesting, both from the viewpoint of its possibilities and the standpoint of its results. The gas industry can have no better publicity than that which appears in the organs catering to other fields. Much has been done along this line by *Industrial Gas,* reprints of whose articles appear frequently in other magazines and newspapers.

Much more can be done not only by the Publicity and Advertising Section but also by other sections with the cooperation of our members and member companies.

Mr. Frank F. Cauley, Manager of Industrial Gas Sales of the Peoples Gas Light & Coke Co., Chicago, recently said:

"Of all our advertising efforts we can trace more new business to articles appearing in trade journals national in circulation than to any other form of advertising or publicity."

Every story of the gas industry released by the Publicity and Advertising Section is carefully gone over with a view to its potential use in national magazines. Stories are not sent out without discrimination. Only those of interest to a special field are sent to a particular publication for use in its columns.

For example, the account of Dr. Wiedlein's address before the American Gas Association went to magazines which might have been interested in the conservation of fuels. An article on the health advantages of gas heating went to magazines dealing with hygiene, sanitation and hospital management. Articles of a human interest nature dealing with the domestic uses of gas go to women's magazines or food and culinary periodicals. Recently we released a story dealing with the activities of gas company emergency crews which was cordially received and printed in a fireman's magazine.

Publicity of this nature is well worth going after and the results, even in this short time, already show that we can count on the cooperation of the national magazines who are only too glad to receive the sort of material which the Publicity and Advertising Section fosters.

ACCOUNTING SECTION

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H. W. HARTMAN, Secretary

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DEXTER, F. P., Boston, Mass.
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ERLACH, PETER, Hammond, Ind.
HAASE, EWALD, Milwaukee, Wis. (Wisconsin)
HALL, H. B., East Braintree, Mass. (Gas Sales)
HALL, ISAAC S., Boston, Mass.
HEINS, J. W., Philadelphia, Pa.
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KELLER, A. R., Syracuse, N. Y.
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REESE, J. G., Baltimore, Md.
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SEARING, R. B., Sioux City, Iowa. (Iowa)
SHORT, A. F., Providence, R. I.
SPEAR, M. H., Flushing, L. I., N. Y.
TOSSELL, A. L., Chicago, Ill.
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CHAIRMEN OF SECTIONAL COMMITTEES ORGANIZED TO DATE

Analysis of Gas Company Statistics—H. J. LAWALL, Philadelphia, Pa.
Insurance—J. G. REESE, Baltimore, Md.
Nominating—J. W. HEINS, Philadelphia, Pa.
Relations with Customers—W. A. DOBRING, Boston. Mass.
State Representatives—A. L. TOSSELL, Chicago, Ill.
Uniform Classication of Accounts—W. J. MEYERS, New York, N. Y.

Credit and Collection Policies

WILLIAM MacMAHON, Superintendent of Collections, Boston Consolidated Gas Company, Boston, Mass.

THE GAS INDUSTRY, like others is continuously changing. Conditions change from year to year; one might almost say, from week to week.

Until recent years, a customer was required to make a substantial cash deposit before service was furnished. This deposit was held by the company until such time as gas service was discontinued. It was then refunded, without interest.

If a deposit was not required, a surety was. This surety had to be a user of gas, also a real estate owner. The contract held the surety responsible as long as the customer used gas or until such time as the surety notified the company in writing that he would no longer be responsible for the account. Very few customers had an account without a deposit or surety.

All accounts, however, were scrutinized closely and if not paid within fifteen or thirty days, gas was shut off without any further ceremony. This condition existed for years.

In later years, however, oil and electricity entered the field as competitors of the gas industry. Competition became keener each year, and these conditions, together with a desire on the part of the companies to improve relations with their customers, necessitated the letting down of the bars. Deposits were not required from everyone. Interest was paid

on deposits where they were required. The customer's gas was not shut off regardless of conditions.

Officials of companies saw the necessity of sending salesmen into the field to sell gas and gas appliances just the same as merchants were selling their merchandise.

At the present time service is usually furnished the same day as the contract is signed, providing the meter is on the premises. The credit department looks up the customer's rating later. In a very large portion of cases, no deposit or surety is required. Where a deposit is required, it is refunded at the expiration of one year, providing bills are paid promptly. Bills are collected monthly and customers are given to understand in polite but firm language that all bills are payable when presented. While this is not possible in all cases, due to different reasons, a systematic follow-up system is carried out and delinquents have their service discontinued, after due notice, when bills are not paid. Service is not discontinued, however, until every effort to collect is exhausted.

Gas appliances of all kinds are sold customers on a lease or easy payment plan. When a customer signs for an appliance, the shop order is sent direct to the shop. Copies are sent to the credit department. This is done to insure prompt service to the customer. If the credit department finds on investigation that the customer is not entitled to the credit, the shop is notified by telephone to hold the order. Immediately the telephone order is confirmed in writing. The salesman is notified in writing and he in turn takes the matter up with the customer.

It is possible under this system that customers may get credit on appliances that should not. The fact remains, however, that the larger majority of our customers are honest and this system of handling our business gives the prompt service to which they are entitled.

The present system of credit and service to customers may make it harder to collect and may increase the amount which is charged to bad debts. This is more than offset by the increased amount of business and the good will which is being created by giving customers prompt service.

The good will of the customer, and the increased sales, is something that does not show in the bad debt column. Therefore, the present policy is to make it easy for the customer to use gas.

Gas Light Company Collects 17 Million Pennies

Seventeen million pennies packed in 14,000 bags, weighing 158 tons and worth just over £70,833, are stored in a cellar in Westminster, London. They are the property of the Gas Light and Coke Company, which collects them from penny in the slot meters. Six hundred million pennies are collected every year from meters owned by this company.

PUBLICITY AND ADVERTISING SECTION
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CHARLES W. PERSON, Secretary

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FRANK, M. H., Fond du Lac, Wis.
FRANKLIN, S. J., Millville, N. J. (New Jersey)
GARDINER, E. F., Chicago, Ill.
JANSEN, F. A., Ottawa, Ont., Canada. (Canadian)
LACEY, W. R., Milwaukee, Wis. (Wisconsin)
LIGHTBODY, JAMES, Vancouver, B. C.
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MCMAHON, J. J., Cleveland, Ohio.
MULLANEY, B. J., Chicago, Ill. (Illinois)
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RAY, DON, San Francisco, Cal. (Pacific Coast)
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SPRAGLE, L. D., New Albany, Ind. (Indiana)
STARR, L. K., Atlanta, Ga.
STELLE, OMAR P., Mount Clemens, Mich. (Michigan)
WATT, A. C., New York, N. Y.

What to Say! Where to Say It! When to Say It!

THE OTHER DAY, P. L. Thomson, publicity manager of the Western Electric Company, and president of the Association of National Advertisers, addressed a convention of New England electric light and power men. The title of his address was "The Central Station's Biggest Job," but his remarks were not directed specifically at the electrical industry but rather at the entire public utility industry. Mr. Thomson's address, with some minor deletions, follows:

What people think of you controls your credit and therefore your growth. Engineering, operating, and commercial considerations, therefore, all are secondary to the willingness of the people to invest their money in your securities and to use your service at rates which will allow you a fair return. Moreover, you will ordinarily get from your constituents the treatment you deserve. If they have a wrong idea about the way in which your business is financed or managed or the fairness of the rates you charge them, in nine cases out of ten it is your own fault because if those conditions are, as a matter of fact, correct, then it is you who are to blame for not having informed the public of the truth. We have heard many times that the public will be fair, if it knows the facts. This puts up to you the responsibility of giving them the facts. The best way to drive out a bad idea is to put a good one in its place.

And so as a student of public opinion I say that you, gentlemen, have a specific job which you ought to be doing in your community. I will classify it under three heads: 1. *What to Say.* 2. *Where to Say It.* 3. *When to Say It.*

What to Say

Point out to your public the community of interest which exists between them and the management of their public utility. Explain why it is that you have a monopoly of the utility business in your town. That isn't a difficult thing to do, but until you break down the suspicion which always revolves around that word "monopoly," you may expect to have it used as an argument against you from time to time. Competition has been tried and has failed. Tell the history of competition in furnishing service, and so disarm the agitator in your town who would seek to embarrass you with a

charge that you have all the business in the town. Point out the nature of your capital and how it is raised. Indicate the extent to which your employees and your customers are buying an interest in the business and point out the ideal situation which follows when those who use the service have a financial interest in the business. Their interest to invest their money safely and get a fair return upon it is then identical with their interest to get adequate service and pay a fair rate for it. This is an effective way to break down the suspicion which always surrounds the words "capital" and "Wall Street." You might even indicate the extent to which the labor unions are going in the business of providing capital through the organization of a chain of banks, and these labor banks, you know, are now cooperating with the great financial institutions of Wall Street in underwriting some large utility financing.

Talk to your public frankly about the problems of managing a business of your magnitude, of the foresight which you exercise in your day-to-day operation providing adequate plant to take care of the peak load, planning for emergency service when a storm puts your power plant out of business, providing in advance a six months' supply of coal in the event of a strike at the mines—all to the end that you may not fail in your high ideal of public service.

And then tell the story of your personnel, the care with which you select your people, the way in which they are trained to a knowledge of the business. Thus you can indicate that the company is not a soulless corporation but a group of human beings just like anybody else in the community, who have grown up and gone to school and built homes and reared families, just like others, and take pride in their life work, which is the rendering of good service to their neighbors.

And, above all, tell this story before you have to. Don't wait until you are on the defensive, and the attack has been opened. These are facts about your business which are no secret. You ought to tell them as something you have a right to be proud of, and thus you can breed a public understanding of, and sympathy with, the institution of which you are a part.

Where to Say It

The best public relations are to be found in those companies where the greatest number of personal contacts are had with the public, from the president to the office boy. You executives ought to set the standard for a kindly and sympathetic contact with the leaders in business and social activities in your town. You yourselves ought to talk once a year to your Rotary Club, your Kiwanis Club, your Chamber of Commerce. You yourselves ought to know the editors in the cities where you operate, and you ought to encourage them to come to you when they want information about your business.

You ought to use others of your executive staff for other contacts in the community. Have you someone contacting with each of the schools, someone who talks before the fraternal organizations, the churches and the women's clubs, and like groups? And then, going on down the line, you have a most unusual opportunity for a month to month contact with every customer on your books through the meter reader who visits the homes. Why is it that the average housewife is ready to believe that her gas and electric light bills are padded? It is because, unlike everything else which she buys over a counter where the scale is in view, Mrs. Jones has to buy her gas and electric light in the dark. The meter is hid away in a remote corner of the cellar, and the meter reader who steals silently into the back

door once a month is a party to a crooked enterprise in which Mrs. Jones is quite ready to believe she is regularly fleeced. Why don't you develop these meter readers into contact men to make minor repairs on the appliances in the home, perhaps to sell new ones when they are outworn; and indeed, why isn't the meter reader with his month-to-month opportunity of getting the customer's viewpoint and gaining the customer's confidence—why isn't he the logical man in your company to be developed into a stock salesman?

Use the radio in talks once in a while. Make it a point to talk once or twice a year to the colleges and the high schools in your territory. The colleges are breeding places for half baked intellectuals with impractical ideas of a socialistic and communistic nature. I know because I was one of those birds myself. When I graduated from college twenty-four years ago I won a prize for an oration entitled "Public Ownership—the answer to the Trust question," and, gentlemen, I have been trying to live down that speech ever since.

When to Say It

The answer to this is almost obvious. Do it all the time. Keep one jump ahead of your critics. There isn't any such thing as an advertising campaign any more than a breathing campaign. You don't breathe for an hour or two and then stop for thirty minutes. Invest regularly in advertising space in all media which reach the people of your city and thus insure your future against the ill-timed attacks of the political agitator. These politicians are no fools. They keep their ear to the ground to find out what platform will be a popular one upon which they may seek votes, and unfortunately the Anti-Big-Business platform is still a popular slogan in certain quarters. This fall we find the leaders of at least three of our political parties seeking votes on that plea.

When you have done this job of public relations for a great many years don't think you can stop. Remember that a certain percentage of your population dies and every year a new crop of voters comes along.

I am glad to say that some of the manufacturers in this industry have sensed this need of selling the utility companies to the public and have and are rendering substantial assistance in their own advertising in the national magazines. I have sensed a feeling among those manufacturers, however, that there has been in too many quarters among the operating companies a feeling that they did not need to advertise because they were "sitting pretty" in their public relations. You must remember, gentlemen, that your cause is no stronger than the weakest link in your chain. In conversation with an editor who was waging a campaign against the light companies and warning farmers to be on the lookout for super-power projects, I found that it was the sins of one or two companies in the past that had led him to assume that the industry as a whole should be looked to with suspicion and fear by the farmer. The bad situation, therefore, in public relations which develops in one state hurts the operators in another state, so that all the companies should maintain a high average of public relationship through the judicious use of some or all of these means which I have mentioned.

It was John D. Rockefeller, I think, who said, "The next best thing to doing a good job is to let the world know about it." Your obvious duty to the public is first of all to give good service. After that make sure that by telling the story of your accomplishments you rob the agitator of the only issue he can raise against you.

The Cost and Appropriation for Advertising

From *The Gas World*, April 26, 1924

AT LEAST AS FAR BACK as the beginning of the present century there were those in the gas industry who recognized the need for systematic advertising. Advertising really began with the beginning of the gas industry, as all who are familiar with Winsor's imaginative incursions into this domain will realize; but its systematization is of much more recent origin. The latter probably began with the practice of printing a list of announcements on the face or back of gas accounts setting out the facilities afforded for various forms of service.

That means of advertising was attractive mainly because it added little to working costs: for a trifling extra sum the announcements could be made coincident with the demand for payment of the account due periodically for gas supplied. Deliberate newspaper or other specialized advertising is of much more recent origin, but from the time of its inception there has been a growing recognition of its effectiveness, and few undertakings nowadays fail to support the British Commercial Gas Association in its cooperative efforts, or omit to supplement it by local endeavor.

A recent writer on the subject said "It is positively necessary to have a defined appropriation," referring to the sum to be expended on advertising.

Is that the right way of approaching the subject? An allocation too low would yield incompleteness of results, while an allocation too high would merely promote extravagance and wastefulness, though, so far as the gas industry is concerned, there is little danger of that, considering the limited amount now expended on advertising.

The real way of approaching the question of advertising, as we interpret it, is to study carefully any or every means that are likely to give satisfactory results, and to put those means into effect.

This line of approach means some experimenting, and some effort to trace back results to the means employed. The latter is not an easy matter, or even possible in some forms of advertising, but the advertising expert or specialist, who is created by practical experience in the domain to which he devotes his energies, usually discovers means of judging the effectiveness of the efforts put forth.

Good advertising costs nothing at all, but yields a return of profit. How, then, can it be assessed at a given figure "per consumer" or "per thousand cubic feet"? It is the testimony of all authorities on advertising that "It pays." But the amount to be so expended can only be rightly limited by distinguishing between what is good advertising and what is not.

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Gas in the Service of Man

THE SECRETARY of the Publicity and Advertising Section is often asked why more printed literature for general distribution is not published by this Section. The obvious answer is that there are not enough subjects of general interest to make it practicable to do so.

The Section has prepared, however, a pamphlet which should be in the hands of every user of gas. The pamphlet is notable not only for its subject matter but for the spirit with which it was made available for use by the entire industry.

The text of the pamphlet consists of a radio talk used by Mr. W. L. Powers, Industrial Gas Engineer of the Geo. D. Roper Corporation, and may well be used as a standard for broadcasting the story of gas, as well as an excellent medium for distribution in pamphlet form.

It was originally intended to credit Mr. Powers and his company in connection with the printing of his paper. This probably would have reduced somewhat its usefulness for many other companies. Mr. Powers, however, has made the *beau geste* of offering it for the good of the gas industry as a whole.

"It would give me great pleasure to have you use this article in whatever manner you may judge to be of greatest advantage to the gas industry or to your Association," he wrote. "I wish to assure you that I, as a Roper man and in pursuance with the Roper policy, will be at all times ready to cooperate with you in the interest of the industry and of the Association."

The pamphlet is entitled "Gas in the Service of Man" and is now available for sample distribution. If you have not already received your copy, please write to the Secretary of the Publicity and Advertising Section at once and he will see that you are supplied.

The pamphlet sells in quantities for about a half a cent a copy.

An Endorsement

The Executive Board of the American Gas Association formally and cordially endorses the work of the National Vigilance Committee of the Associated Advertising Clubs of the World and of the Better Business Bureau organized under its auspices. The Board regards this work as most valuable for the protection of the public against fraudulent and doubtful investment proposals. In view of the policy of the Customer Ownership Committee of the Association in urging the sale of securities to customers of gas companies, we believe it important to encourage the work of the Better Business Bureau in educating the public towards investing in sound securities. We, therefore, commend these organizations to our member companies and suggest full cooperation with them.

The First 100,000

THE FINANCIAL ASPECTS of gas service are receiving the attention of the public as never before. As proof, approximately 100,000 copies of the pamphlet entitled "The Future of Gas Company Securities," based on an interview with John Moody, have been distributed on demand to our member companies from Association Headquarters. All were sold at cost of printing in quantities varying from 100 to 25,000.

The great demand for information of this character can mean nothing else than that gas users are looking further than the kitchen range—further than the preparation of the next meal. We believe they are more than ready for an extension of the customer ownership idea. When John Smith participates in the financing of his local utility he gets an inside view of its problems which is more vivid and more lasting than any number of newspaper columns could possibly give him.

Mr. Moody enlarged on this subject before the gas convention in Atlantic City and we have prepared a limited number of mimeographed copies of his talk which can be obtained on request. There are not enough for wholesale distribution, but member companies can have them copied or printed and use them in any way that seems desirable.

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Ford Sends in His Card

Henry Ford in his advertising campaign, which is being followed with interest by advertising men everywhere, illustrates a point of technique which can be applied in many ways. He is advertising Fordson trucks and tractors to industries of all kinds, including the gas industry; and he is advertising on the principle of making his selling talk in the language of his prospect.

Thus, he solicits the gas industry with our own slogan: "You can do it better, quicker, cheaper with Fordson."

Gas company advertising as well as every other form of publicity is most effective when it takes the point of view of the customer.

MANUFACTURERS SECTION

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C. W. BERGHORN, Secretary

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STOCKSTROM, A., St. Louis, Mo. (Missouri)
WELLS, F. K., Boston, Mass. (Gas Sales of N. E.)
WESTON, J. A., Detroit, Mich. (Michigan)
WHITELAW, H. L., New York, N. Y.

CHAIRMEN OF SECTIONAL COMMITTEES ORGANIZED TO DATE

Exhibition—WENDELL L. SMITH, Battle Creek, Mich.
Nominating—GEO. W. PARKER, St. Louis, Mo.
Laboratory Equipment—DONALD McDONALD, New York, N. Y.
Division of Accessories Manufacturers—R. MUELLER, Decatur, Ill.
Division of Apparatus & Works Manufacturers—JOHN LOWE, New York, N. Y.
Division of Gas Range Manufacturers—CHARLES T. AARON, Newark, N. J.
Division of Heating Appliance Manufacturers—H. L. WHITELAW, New York, N. Y.
Division of Industrial Appliance Manufacturers—P. C. OSTERMAN, Elizabeth, N. J.
Division of Lighting Appliance Manufacturers—TOWNSEND STITES, Gloucester, N. J.
Division of Meter Manufacturers—W. H. JEFFERSON, New York, N. Y.
Division of Office Labor Saving Devices—H. J. JOHNSON, New York, N. Y.
Division of Water Heater Manufacturers—P. H. HAMILTON, Cleveland, O.

What Some Manufacturers Think About Business Prospects for 1925

WM. M. CRANE, Chairman of Board, Standard Gas Equipment Corporation, New York, N. Y.:

"Prospects for gas appliance sales in the hotel, hospital and institution field for 1925, from the present outlook, will show an increase. The year 1924 showed an increase over 1923 and many coal installations were displaced in favor of gas.

"We believe that gas companies have got to consider very seriously lower gas rates for large consumers doing cooking on a large scale, either for institution work or commercially; because hotel and restaurant men in general at their association meetings are constantly bringing up the subject of high gas rates, and will welcome any new idea that is brought to them where they can change over to electricity or oil, and even consider going back to coal.

"The reason for this statement is the fact that the electric appliance manufacturers are becoming very active in this field, and in some parts of the country are making considerable headway, although in many instances the high electric rates would not warrant changing from the present kind of fuel.

"It is a fact that electric appliance manufacturers are making erroneous statements regarding the difference in the cost of operating between electricity and gas. Up to the present time, we have not seen one installation of electric equipment that could possibly be operated at a lower cost than gas equipment,

nor will it do the work as well.

"Electrical appliances show up to advantage only in places generating their own current, which is being done by some hotels, hospitals, and institutions. But there is a drawback to this for the reason that when most current is required in the kitchens, it is the time of day in hotels when there is a great demand for current for lighting guest rooms and other parts of the building and for operating the elevators.

"We believe there is a big field in the future for hotels, cafeterias, and restaurants for gas consumption."

W. L. Smith, Vice-President, A-B Stove Company, Battle Creek, Michigan:

"In response to your telegram of even date, we believe that the gas appliance industry has not participated in the generally retarded industrial activity this year to the extent of most manufacturers in other lines. While there has been a great deal of talk of curtailed building operations, we doubt if the stove industry, in particular, has felt any slackening.

"Our particular business here is larger right now, during these fall months, than at any time in our history; in fact, our total business to date is considerably in excess of the corresponding period last year.

"While there is considerable indication that building operations will be considerably curtailed during 1925, our opinion is that this will not noticeably slacken the gas industry. The replacement business in gas ranges has grown very decidedly the last two or three years, in view of the demand of the house-wife for more modern products, especially the white enameled range and the oven heat control. A great many ranges are being replaced at this time, not because they are in an unserviceable condition but because the user wants the newer type of appliance.

"This one condition, we believe, will more than offset any slackening in building operations during the coming year, and we see no reason why the stove industry, generally, should feel any slowing up during the coming year."

Edward P. Bailey, Jr., President, The Bryant Heater & Mfg. Co., Cleveland, Ohio:

"Not only are our sales of boilers larger in the established territories; there have been many sales, these past two years, in cities where gas heating was almost unthought-of five years ago.

"Here and there, distributors of manufactured gas have made more than ordinary efforts to acquaint their customers with the advantages of gas for house heating. In such instances, the results have completely justified those efforts. The response would be deemed satisfactory in any year; it is remarkable for a 'presidential' year!

"In other sections of the country, house heating business has come to the gas companies almost unsought. There has been only a modest amount of national advertising of central house heating with gas. However, our numerous competitors, the oil burner manufacturers, have given 'automatic heat' considerable publicity. Our best prospects continue to be those people who have tried oil, then sought for something more satisfactory, and have finally come to gas—the perfect fuel.

"Since sales in old territories have steadily increased, and as new territories have opened up, we feel justified in predicting that the gas house heating business will be even better next year—and the next—and the next."

F. H. Knapp, President, Pittsburg Water Heater Company, Pittsburgh, Pa.:

"There has been a steady natural growth of the water heater business, particularly noticeable over the past 10 years. All of the older and larger companies have had this experience. Up until a few years ago there was more or less hesitancy on the part of the public to purchase the automatic type of water heater, but they are all convinced now that it is a safe appliance to use—is very economical for the service rendered and it is practically indispensable in the modern home.

"We will unquestionably have an increase in business over the fall months for in this particular district, where the money which is being distributed comes from the pay rolls of the steel mills, coke ovens and glass plants, they are all increasing their working hours and putting on more help. That is the surest sign of prosperous times, and furthermore, I once said—'If there is a good sized pay roll being distributed in any city we have no trouble to sell a large quantity of water heaters.'

"The water heater business as a load factor for the gas companies is one of the best that they can put on their lines. It burns gas 365 days of the year and therefore the revenue is a fixed one over a 12-month period and not limited to seasons. It is also a fact that it will be many years before the gas company will reach the point of saturation with gas-fired water heaters of any type. At the present time it is the poorest sold appliance that I know of with all the effort that has been put forth by the manufacturers and the gas company."

G. D. Roper, President, Geo. D. Roper Corporation, Rockford, Illinois.:

"My observation leads me to believe that general business conditions all point to material strengthening of markets. This means, as I see it, that, fundamentally, conditions today are much better by far than a year ago.

"The outlook for gas range business, as I view it, was never better, where gas companies have adopted an aggressive sales policy and will build, where they do not already have, a strong selling organization.

"Our experiences with a large number of gas company sales and merchandising departments, show us conclusively that the gas companies are making rapid strides in the sale of gas ranges and in merchandising policies. If a general effort is exercised by the gas companies, no competitive lines need cause gas companies any apprehension.

"It is true the electric range business is growing and will continue to do so, due in a large measure to the increasing sale of the *idea of electric cooking* and the methods adopted by the electrical industry *to sell that idea.*

"Where gas companies carry merchandising lines, progressive gas men and sales organizations need have no fear about electric competition, provided the sales and merchandising are conducted along lines of high class merchandising establishments.

"It is a regrettable fact that many of the gas companies, particularly the smaller companies, neglect the appearance and make-up of their sales emporiums, while on the other hand the electric companies do not show this neglect. They usually have well lighted, well painted rooms, with merchanidse of high quality well displayed.

"Again, the idea of selling electrical merchandise on its merits, regardless of price, is an angle which gas merchandising departments can well emulate.

"My observation leads me to believe that the general public is continually demanding a higher class product from the industry, as a whole, and that the educational work done by the Bureau of Mines, members of the industry and the appliance manufacturers, is bringing about a demand from the public for more efficient and economical operating apparatus. This is particularly true in the natural fields and is being felt also to some extent in the manufactured territory, and will be felt more as time goes on. The demand, I find also, is for reasonable terms in the resale of merchandise to the consumer. Since this is a part of the service that the utility can well afford to give and does, in a large majority of instances, I believe it could be looked into by some of our other friends in the industry, with advantages to themselves."

W. E. Derwent, Vice-President, Geo. D. Roper Corp., Rockford, Ill., and Vice Chairman of Manufacturers Section.

"My survey of gas companies leads me to believe that conditions generally all point to the largest year in the history of the business. Estimates given me range from 20 to 50 per cent increases. Our business requires two shifts, day and night operation, to take care of the demand."

Donald McDonald, Secretary, American Meter Company, New York, N. Y:

"In August, 1918, when the gas industry was at low ebb, a man, whose experience eminently fitted him to make the prediction, told me that he believed the business of making and selling gas in the United States was in its infancy. Events since tend to demonstrate that his prediction was correct. I think that when we come to foot up the results of 1924 we will find that the gas business has had a most remarkable year. I believe that 1925 will prove to be more remarkable, and that the infant is entering upon another period of lusty and unprecedented growth."

P. H. Hamilton, Chief Engineer, Sands Mfg. Company, Cleveland, Ohio, and Chairman, Water Heater Division, Manufacturers Section:

"From present indications the outlook for the year 1925 on water heaters is very bright, and it appears from all standpoints to be a banner year.

"We believe there will be more water heaters sold in the year 1925 than in any previous year. Orders are coming in at a rate today which fairly makes certain good business for the first six months at least, and we look for the last six months to be fairly good. We believe there will be an advance, but we do not believe the advance will be big enough to stop the sales.

"Business will be good at slightly increased prices, and should be what we might call a 'healthy business.'"

Charles T. Aaron, Thatcher Furnace Company, Newark, N. J., Chairman Gas Range Division, Manufacturers Section:

"Optimistic views on the business outlook for 1925 are heard on every hand, and I cannot see where any one can hold the opposite view. We, in the stove industry, are to my mind facing the continuance of the building operations which have been going on for the past year. During the war, and shortly afterward, there was practically no building due to high labor and material costs, and this lack of building caused a shortage, which we are now trying to overcome. New

buildings mean increased business for the stove industry, and I believe the majority of the manufacturers are awake to this possibility and are laying their plans accordingly.

"Nineteen twenty-five will be a big year in total business for those who are awake to the possibilities and who lay their plans to cash in."

F. A. Lemke, Secretary & Treasurer, Humphrey Company, Division of Ruud Mfg. Co., Kalamazoo, Michigan, Member at Large of Managing Committee Manufacturers' Section:

"We believe 1925 is going to see a period in the growth of the gas business, an increase in gas sales and gas appliance sales, such as will make the figures of any past year look puny indeed by comparison.

"The public is receptive to the subject of gas use through the medium of good gas appliances as never before. Active efforts, therefore, to sell good, worthy gas appliances of adequate service-giving qualities, possessed of reasonable operating costs and effective, lasting qualities, will be fruitful as never before.

"Our efforts for 1925 are directed to plans to care for a much larger business. The broader sale of automatic hot water service in 1925 is a point on which we look with particular enthusiasm."

H. Leigh Whitelaw, General Manager, The A. H. Wolff Gas Radiator Company, New York, N. Y., Chairman, Heating Appliance Division, Manufacturers' Section:

"The interest in heating with gas is rapidly becoming general, and is no longer confined to a few of our large centers of population supplied with manufactured gas, or in communities served by the natural gas fields.

"Oil burner manufacturers through their publicity are paving the way to the discovery by the general public of Gas —the ideal all-purpose fuel.

"I believe that the percentage of increase in the use of gas for heating in the year 1925 will exceed by far any previous year.

"However, I do not believe that this growth will be so rapid as to make it a serious question for gas companies in taking on the load or making provision for it."

Henry O. Loebell, Vice-President & General Manager, Combustion Utilities Corporation, New York, N. Y., Chairman, Industrial Gas Section:

"The year 1925 should be a year of great activity and progress for the gas industry. Every one is familiar with the many signs which indicate the general improvement of business conditions. The gas industry will naturally follow this trend.

"There is, however, a greater opportunity for the gas companies than to watch the movement of their craft in the stream of business improvement. The stimulation of industry as business improves, the need of a heating service based on a fuel fundamentally sound in its economics and utilization, the need of lower production costs in the face of high wage levels—this combination is the foundation and opportunity for intensive sales effort on the part of everyone connected with the artificial gas industry.

"The year 1925 will witness more progress made than in any previous year towards our objective of supplying a universal heating service. As we approach this goal there will come a new faith and vision of the position of our industry in the economic life of the nation."

P. C. Osterman, Vice-President, American Gas Furnace Company, Elizabeth, N. J., Chairman, Industrial Appliance Division, Manufacturers' Section:

"At the present time, and for the past several months, we have more orders on our books than for a considerable period in the past. There are new active inquiries which we confidently expect will result in business, so that we have a very optimistic outlook, for the Industrial Appliance business, for 1925."

Robert Mueller, Secretary, Mueller Co., Decatur, Ill., and Chairman Division of Accessories Manufacturers, Manufacturers' Section:

"We are very optimistic regarding the business outlook for gas appliance accessories. Our branches are reporting many orders for drilling and tapping machines and tools, service clamps and valves. We expect 1925 to be one of the biggest years in this line."

W. H. Jefferson, Eastern Representative, Cutler-Hammer Manufacturing Co. of New York, N. Y., and Chairman Division of Meter Manufacturers, Manufacturers' Section:

"From my conversations with representative gas men throughout the country it is apparent that preparations are under way for greatly increased activities during the coming year."

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A Monument and a Relic

Monument to the first cook stove made in America, erected at Forgedale, Pa.

Inscription

1734—1768
Hereford Furnace
operated by
Thomas Mabury

First cook stove in America made here.
Historical Society of Berks County, 1915.

One of the first of the modern ranges, cast in 1862.

INDUSTRIAL GAS SECTION

H. O. LOEBELL, Chairman — F. F. CAULEY, Vice-Chairman

C. W. BERGHORN, Secretary

MANAGING COMMITTEE—1925

ALLINGTON, J. B., Rochester, N. Y.
ANDREW, H. O., New York, N. Y.
BROUGHTON, H. E., Jackson, Mich. (Michigan)
CLARK, H. H., Chicago, Ill. (Illinois)
DE CORIOLIS, E. G., Boston, Mass.
DEFREITAS, W., New York, N. Y.
HARDING, D. J., York, Pa. (Pennsylvania)
HENRY, H. M., New York, N. Y.
HEPBURN, W. M., New York, N. Y.
HILTON, C. A., Pawtucket, R. I., (Gas Sales of N. E.)
HOLMAN, H. B., St. Louis, Mo. (Missouri)
HORN, R. J., Texarkana, Tex. (Southwestern)
KRAUSSE, C. C., Baltimore, Md.
LEINROTH, J. P., Newark, N. J.
METTENET, F. X., Hammond, Ind. (Indiana)
MOREHEAD, JR., I. H., Atlanta, Ga. (Southern)
MUEHLBERG, C. E., Denver, Col.
PETERSON, C. G., Providence, R. I.
QUINN, J. F., Brooklyn, N. Y.
QUINN, J. J., Quincy, Mass. (N. E. Gas Engrs.)
RAMSAY, R. E., Philadelphia, Pa.
SCHUETZ, A. A., Milwaukee, Wis. (Wisconsin)
SELLMAN, N. T., New York, N. Y.
SLIMPIN, C. D., Montreal, Canada. (Canadian)
SMITH, H. H., Boston, Mass.
STAHL, C. R., Davenport, Iowa. (Iowa)
STEPHANY, E. J., Pittsburgh, Pa.
THOMPSON, W. D., St. Louis, Mo.
WATSON, H. E. G., Toronto, Ont., Canada.
WHITWELL, G. E., Tacoma, Wash. (Pacific Coast)
YOUNG, R. R., Newark, N. J. (New Jersey)

CHAIRMEN OF SECTIONAL COMMITTEES ORGANIZED TO DATE

Advertising—F. F. CAULEY, Chicago, Ill.
Contact with Committee on Cooperation with Educational Institutions—J. J. QUINN, Quincy, Mass.
Education of Industrial Salesmen—J. P. LEINROTH, Newark, N. J.
Nominating—H. H. CLARK, Chicago, Ill.
Policy—F. F. CAULEY, Chicago, Ill.
Progress & Development—C. C. KRAUSSE, Baltimore, Md.
Publicity—H. O. ANDREW, New York, N. Y.
Rate—H. O. LOEBELL, New York, N. Y.
Research—J. B. ALLINGTON, Rochester, N. Y.
Survey—R. E. RAMSAY, Philadelphia, Pa.

Dry Sterilizing of Mattresses and Pillows

THOMAS TELFER, Pacific Gas and Electric Company, San Francisco, Cal.

IN 1923 THE California State Board of Health adopted the following regulations governing the sterilization of mattress materials:

"Resolved, that secondhand material, waste, shoddy or other materials named in the Act, shall be considered properly disinfected if immersed in water, maintained at a temperature of 212 degrees Fahrenheit, for at least ten minutes, with proper arrangement for agitation of material while in the vat, and if, after disintegration the material will pass through a hole one and one-half inches in diameter.

"Mattresses shall be considered properly disinfected when subjected to a temperature of not less than 230 degrees Fahrenheit for a period of not less than 30 minutes."

It is quite obvious that such regulations are necessary and of great value in protecting the public health, and preventing the spread of disease. Enforcing such regulations and causing a general recognition of their value by the public is, however, quite another matter. It is a case where the planning is far easier than the execution. Thus for quite a time after the adoption of these regulations nothing was done toward enforcement. To carry out the plan a complete plant with a sterilizing outfit and an operating force is necessary. The initial capital outlay with the resulting plant depending entirely upon the enforcement of the law for a livelihood was a risk not grasped for by the average business man.

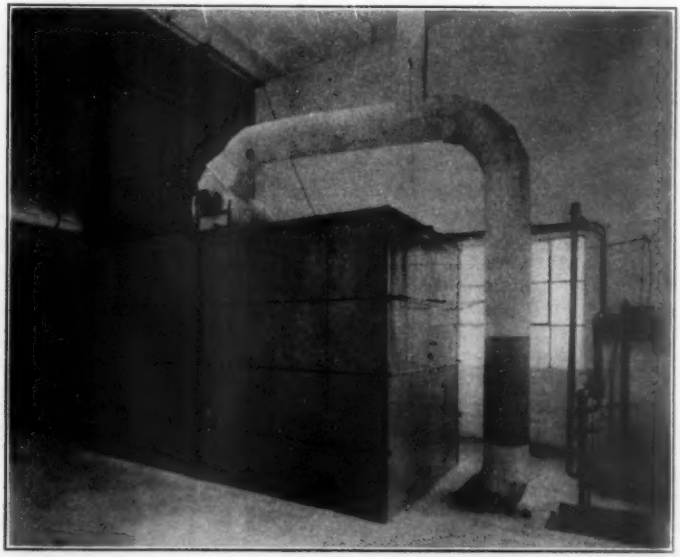
However, the initiative was finally taken by a San Francisco business man and a plant was constructed at 144 Russ

St., San Francisco, which is known as the Central Sterilizing Plant. This plant is worked on a commercial basis and the business is limited almost entirely to fulfilling the sterilizing requirements on mattresses and pillows.

The particular section of the law governing mattresses and pillows requires a dry heat of 230 degrees Fahrenheit maintained for thirty minutes. To meet these conditions an oven was constructed to give an even heat throughout. A cold spot brought up to temperature would mean a resulting hot spot in another section with scorching effect upon the materials being sterilized. It was found that the average article would scorch at 275 degrees F. Some of the lighter and less expensive materials scorched at much lower temperatures. The firing of the oven presented a variety of requirements to produce the necessary heat, quickly, accurately and evenly. The maximum burner capacity must give 230 degrees Fahrenheit within two or three minutes after a load has been placed in the oven, and yet have a minimum burner capacity small enough to just hold at 230 degrees Fahrenheit or drop a few degrees. To furnish an evenly heated atmosphere at all times a system of quick recirculation was necessary, and this also helped considerably in giving a fast temperature rise. A truck or carriage was essential to the operation, as no loading could be done in direct contact with the heat of the room. The construction of the truck had to be such that it could be easily and quickly unloaded, reloaded and moved.

Insuring the correct temperature and controlling it to give automatic operation completed the requirements of a commercial plant to do work of this kind.

The oven was built in sections with tongue and groove joints, the walls being of heavy sheet metal filled with Sil-O-Cel C-3 powder. This construction gave a three-inch wall of insulated material.

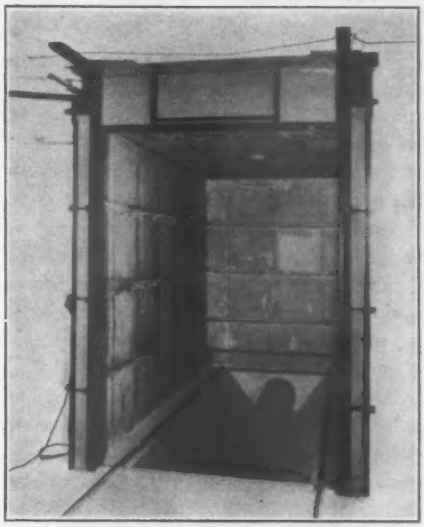


THE OVEN.
Showing methods of firing and recirculating air.

The sections were bound into a unit by angle iron corners and braces with longitudinal tie-rods bolted tight. The inside dimensions of the oven are 6′ x 13′ x 8′. The roof sections were made to cap over the side walls, giving a tight seal on the top, while the base was sealed by grouting into a channel iron frame set in a groove in a concrete floor. A counterbalanced door was provided of the same general construction as the walls of the oven, making up practically the full size of the front wall.

Surface combustion low pressure equipment was used for firing, with air at one pound from a positive pressure blower. The air from the oven is drawn into a fan blower and blown through a large pipe down into the combustion chamber. A single burner is used which fires through a tunnel directly into the combustion chamber and also into the path of the recirculating air from the oven. The heated air is blown from the combustion chamber into a large pipe which has 2″ perforations graduated to give a good distribution of heat. This pipe lays on saddles in a recess two feet deep in the bottom of the oven. In this manner the heat travels directly up through the articles being sterilized without a spot heat at any point, and the air again travels around to enter through the combustion chamber. The recirculation blower has capacity for completely changing the air in the room twice in one minute. A vent with a variable opening is provided leading off the recirculating pipe to eliminate disagreeable odors and products of combustion.

Charging is done by means of a truck constructed of channels and strap iron and running on wheels fitted with ball bearings for easy operation. To minimize the loss of heat from the oven during the charging operation, the rear of the truck is fitted with a set of spring-operated



INTERIOR OF OVEN.
Showing pipe with perforations to distribute heat in oven.

flaps bearing on the inside of the doorway when the truck is in the loading position, and completely closing the doorway. The position of the truck is controlled by blocks inside and outside the room. Tracks are set for running the truck in the correct position over the firing pipe inside the oven. Twelve mattresses may be sterilized in one load.

Temperature control and automatic operations are provided by a thermostat operating in the air supply to the surface combustion inspirator, which with its one valve control and wide range of operation at a high efficiency adapts itself particularly to control of this type. The thermostat is specially built for a temperature range of 60 to 250 degrees F. and operates in connection with Minneapolis control equipment to open or close a snap action valve on the main air line. The valve is by-passed to give the minimum capacity after the oven has come up to heat. Thus we have an oven that requires no attention after lighting and one that

maintains the correct conditions for sterilizing.

The capacity of the oven is 170 mattresses per day of eight hours. The amount of fuel per mattress is 15 cu. ft. of gas while the power for motors adds .2 kw. to this figure. One man can operate one oven and run the plant.

Each mattress or pillow sterilized is tagged and stamped with the seal of the Central Sterilizing Plant. A number is assigned to each piece and a record kept as to date and dealer to prevent interchange of tags.

The only plant equipment required besides the oven installation is a number of dolleys to handle about ten mattresses each, used for placing mattresses before and after sterilizing.

On an installation of this type gas is particularly adapted. It permits of direct firing with resulting economy. It is clean, a characteristic absolutely essential in sterilizing. It allows of easy and accurate control, a merit desirable both in fuel economy and ease of operation.

The Central Sterilizing Plant in operation today is performing a service for the public health in helping prevent the spread of disease through negligence and carelessness. In the city in which it is operating the public need no longer buy a rebuilt mattress with any concern as to where the materials had their origin. One can demand a sterilized mattress or pillow and be assured of its condition by the tag and seal of the plant. It has been determined that, aside from the health standpoint, the sterilizing has a marked beneficial effect in producing a new life and lightness in the mattress and pillow materials which makes the article a better seller for the dealer to handle.

This type of oven may be used advantageously on any drying or heating process where a heat is to be quickly reached and maintained and which may range from 200 degress F. to 500 degrees F. It may be controlled at any temperature by setting the thermostat for that particular point, thus giving an oven for a variety of uses and heats.

An Appreciation

Right here I would like to suggest that if any of you are not members of the A. G. A. you are missing a most valuable opportunity. The service that it is giving both from the headquarters and through committees, papers, etc. is equal to, if not surpassing, any association of public utilities and a man desiring to be a progressive and representative gas man can ill afford to not be a member.—F. C. Weber, Chief Technician of Henry L. Doherty & Company, before the Pennsylvania Gas Association at Reading, December 4, 1924.

COMMERCIAL SECTION

J. P. HANLAN, Chairman — R. L. BURDICK, Secretary — J. B. MYERS, Vice-Chairman

MANAGING COMMITTEE—1925

ADAMS, W. A., Chicago, Ill.
AMMERMAN, RAY, Jenkintown, Pa.
ATWOOD, B. H., Wilmington, Del.
BAILEY, E. P., JR., Cleveland, Ohio.
BARTLETT, C. E., Philadelphia, Pa.
BURKE, E. J., Indianapolis, Ind. (Indiana)
BURNS, J. J., St. Louis, Mo.
CANNIFF, R. J., Poughkeepsie, N. Y.
CAPEN, FRANK, Boston, Mass. (Gas Sales of N. E.)
CLARK, J. C. D., Boston, Mass.
CLAY, NOBLE L., Winston- Salem, N. C.
COONEY, E. J., Lowell, Mass.
CORL, WILEY F., St. Louis, Mo. (Missouri)
CRANKSHAW, J. WARD, Allentown, Pa. (Pennsylvania)
DAVIES, J. E., Chicago, Ill.
GASTON, LUTHER, Birmingham, Ala. (Southern)
GOULD, WM., Boston, Mass.
GRADY, STANLEY, Philadelphia, Pa.
HAYES, D. W., Detroit, Mich. (Michigan)
HUMM, A. W., New York, N. Y.
JOHNSON, W. B., Toronto, Ont., Canada. (Canadian)
JONES, JACOB B., Bridgeton, N. J. (New Jersey)
KARSHNER, G. M., New York, N. Y.
KENNEDY, THOS. F., New York, N. Y.
KEYS, HARRY, Pittsburgh, Pa.
KLOPF, G. C., Chicago, Ill. (Illinois)
LITTLE, STANLEY E., Lorain, Ohio.
LUTHER, C. A., Chicago, Ill.
MARTIN, E. H., Des Moines, Iowa. (Iowa)
NORTH, M. F., Fort Wayne, Ind.
PHENICIE, C. R., Green Bay, Wis. (Wisconsin)
POST, A. F., Philadelphia, Pa.
REAGAN, W. J., Utica, N. Y. (Empire State)
SMITH, DORSEY R., Baltimore, Md.
STOTE, LOUIS, Philadelphia, Pa.
SWANN, IDA BESSIE, Newark, N. J.
TUDBURY, JOHN L., Salem, Mass. (N. E. Gas Engrs.)
VALENTINE, H. D., Chicago, Ill.
WARDELL, C. W., Philadelphia, Pa.
WHITWELL, G. E., Tacoma, Wash. (Pacific Coast)
WISKE, P. B., Brooklyn, N. Y.

CHAIRMEN OF SECTIONAL COMMITTEES ORGANIZED TO DATE

Architects and Builders—W. A. ADAMS, Chicago, Ill.
Gas Refrigeration—H. D. VALENTINE, Chicago, Ill.
Home Service—MISS ADA BESSIE SWANN, Newark, N. J.
Sales Stimulation—R. J. CANNIFF, Poughkeepsie, N. Y.

The Dignity of Pulling Door Bells*

BY ONE WHO HAS

We consider this article so good that it bears repetition. Distribute copies to your sales representatives. It will give them the inspiration and pep so necessary to maintain their interest.

"PULLING DOOR BELLS" is a form of selling that does not appeal to most salesmen. Undignified, you know, and that. A man hates to be a part of the endless procession of house to house peddlers, panhandlers and children with "chances" to sell, and so he drifts into other branches of selling. He prefers to call upon business people, which means he must spend from 60 to 90 per cent of his time cooling his heels in outer offices waiting to get a moment with his prospect. And what a prospect! Usually a hard-boiled executive who counts that day lost when he has failed to score an even dozen flat turndowns for importunate gentlemen.

How much less footwork, less waiting, more action, quicker action when pulling or to be more exact—pushing door bells. A first class salesman with something that every women wants stands a chance to make much more money in the house to house game than in the so-called higher class field among business men. Take a good salesman with a good gas range to sell, for instance. Every woman actually yearns for a beautiful modern gas range. You salesmen who are thinking of the difficulties attending the various steps—Attention, Interest, Desire, Decision, Action—in making a sale, think of a prospect who actually craves what you have to sell. A good salesman with

*Reprinted by courtesy of the Gas Age-Record, January 13, 1923, issue.

a liberal time proposition and possibly some proposal for taking the old worn out gas range off the woman's hands, if he would put the same earnestness and pride in his work that he does when selling bombproof executives who don't yearn worth a cent, could make a real cleanup.

The trouble is, when a man begins to understand house to house salesmanship, he wants to graduate into something more "dignified." He wants to hook up with an oil concern, or a bond house, or to take on some specialty or promotion stunt that sounds like big money. He gets out and makes room for some other door bell ringer.

Not all house to house men are beginners. Some are old timers who have never forsaken the house to house field. Many of them lack ambition to rise. Some are crooked, some lack confidence to embark into a field that puts them in competition with "high powered" salesmen. These men are not getting out of the house to house field all there is in it.

If a man who has ambition to get out, who can get out, but who doesn't get out, remains in the house to house selling game, idealizing his job, working regular hours, putting as much ingenuity into all phases of his job—making a successful approach, winning the confidence of his prospect, helping the woman to realize her fond ambition to own a fine new gas appliance or device, he has a job worth while.

Women buyers respond much more readily to sales efforts than the average man. Women are the principal buyers of home comforts. If it were not for the women, men would still be content with the crudest household equipment. Take foreign countries, where man has much more to say about the house, and see how poorly equipped with modern conveniences are the homes. In America, where woman rules the house, we have more bath tubs, more vacuum cleaners, more washing machines, more steam heat, more victrolas, more telephones, more good gas ranges, more water heaters, more everything worth while, than any country in the world.

It is because the women do the buying. We say the multiplicity of comforts, labor-saving devices, home conveniences, make for effeminacy. It means that women appreciate the comforts and conveniences, perhaps because they need them more than men do.

The best retail market for home comforts is in the house to house field. All the department stores have to do is to print pictures and prices, practically no selling talk in their advertisements, and the women storm the stores and clamor to buy. They don't need real sales people, at least they have very few in the department stores. Incompetent, unhelpful, uninterested, take-or-leave-it sales people merely write the orders and the department stores do millions of dollars worth of business.

The women put up with all this and buy anyway. They yearn for things and they buy. This simply illustrates the state of mind of the average woman. Men buy because they have to, not because they want to. If a salesman who can induce men to buy what they do not really crave were to direct one-half of his ability and his effort into the house to house salesmanship, taking pride in his work, he would find his pathway infinitely smoother and his job much more profitable.

November Window Display Winners

The Prize Window

Submitted by E. F. Putnam, Dist. Supt., Connecticut Light & Power Co., Norwalk, Conn.

Honorable Mention

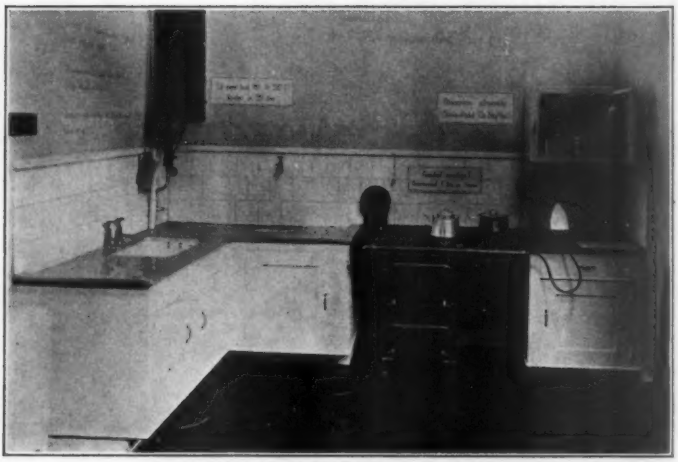
Submitted by M. D. Ogden, Humphrey Co., Kalamazoo, Mich.

Home Service Abroad

THE BUILDING AND LIVING ASSOCIATION of Sweden, locally known as the Byggi & Bo, believes in bringing its home service departments to the people instead of waiting for the people to come to them. The exhibits, reproduced here, are temporary and are sent from city to city throughout the country where the latest improvements in kitchen appurtenances are viewed by thousands every year. The Byggi & Bo does on a national scale what our home service departments do locally on a small scale.

Madam Dagmar Waldner, well-known Swedish lecturer and home expert, through whose courtesy these pictures were obtained, says there is a great field in this country for similar work which she thinks might be undertaken nationally by the gas industry.

Madam Waldner had nothing but



praise for the public utilities of the United States, which she said had become the true emancipators of the American women, performing her household chores while she does the work of the world.

The exhibits of the Byggi & Bo are notable for their compactness. It is doubtful if the exact installations pictured would meet the approval of our authorities. However, the Swedish people have gone a long way toward improving domestic utilization of gas and perhaps we are not beyond learning a thing or two from them.

To Have or Not to Have a Home Service Department?

DOES A Gas Company's Home Service Department increase the consumption of gas for cooking and baking? Does it give the family nourishing home baked bread, properly baked pies, nutritious cakes, reduce the housewife's cost of food supplies and build up the best kind of American homes? Look on this picture and let it tell any wavering gas company why it should adopt HOME SERVICE.

In Memoriam

Robert Y. Clark, Consolidated Gas Co. of New York,

R. C. Lewis, Supt. Shop, Distb. Dept., The Brooklyn Union Gas Co.

TECHNICAL SECTION

R. C. CORNISH, Chairman — J. P. HAFTENKAMP, Vice-Chairman
H. W. HARTMAN, Secretary

MANAGING COMMITTEE—1925

BATES, H. E., Chicago, Ill. (Illinois)
BECKJORD, W. C., New York, N. Y.
BERTKE, W. A., St. Louis, Mo.
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BUCKMINSTER, R., Pawtucket, R. I. (Gas Sales)
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CARTER, JR., R. A., New York, N. Y.
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HUMPHREYS, J. J., Montreal, Quebec, Can. (Canadian)
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LYONS, B. F., Beloit, Wis. (Wisconsin)
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SNYDER, A. I., Detroit, Mich.
STRENG, L. S., Louisville, Ky.
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VITTINGHOFF, H., Boston, Mass.
WEBER, F. C., New York, N. Y.
WILLIAMS, C. T., Sioux City, Iowa. (Iowa)
WILLIEN, L. J., Boston, Mass.
YARD, W. S., San Francisco, Cal. (Pacic Coast)

CHAIRMEN OF SECTIONAL COMMITTEES ORGANIZED TO DATE

Carbonization—A. M. BEEBER, Rochester, N. Y.
Distribution—H. E. BATES, Chicago, Ill.
Measurement of Large Volumes of Gas—M. E. BENESH, Chicago, Ill.
Nominating—L. J. WILLIEN, Boston, Mass.
Revision of Catechism—W. J. SERRILL, Philadelphia, Pa.
Water Gas—J. H. WARNICK, Elrama, Pa.

The Value of Industrial Research to Industry*

DR. E. R. WEIDLEIN, Director, Mellon Institute of Industrial Research, Pittsburgh, Pa.

FIRST, I WANT TO SAY that there has been a change in the attitude of research men. We used to be classified more or less as freaks. We were accused of hiding ourselves in some university laboratory and not coming out in the open or working in close touch with industry. I can assure you that that condition has been entirely changed in the last few years. The close association of research men with men in industry has changed them from freaks, and industrialists are beginning to realize that research men possess a good deal of commonsense.

This is the third time in the period of about a month that I have been in this same hall before associations, and one of the important things that these associations have been interested in is industrial research. In the first place, let us determine what we mean by industrial research. It can be summed up very clearly by saying that its purpose is to promote the success of manufacturing practice through scientific investigation. Before anything can be utilized in any way it must be discovered, and it is the particular function of science to reveal it. It is the duty of the scientist to discover and of the engineer or inventor to recognize and apply the results achieved. Industrial research ranges from the one extreme of the discovery of a new fact and the establishment of a successful industry thereon, such as the manufacture of aluminum, to the modification of an established industry wherein raw materials and economic conditions are changing constantly, as, for example, in the manufacture of iron and steel.

*Address delivered before the Sixth Annual Convention, Atlantic City, 1924.

The ruling classes of people today are beginning to appreciate the value of scientific and especially of chemical research in effecting the material progress which in turn is shaping the destinies of men and nations. Our present state of civilization has not come about by mere accident but through gradual advance in the application of science to the needs of mankind, which Mr. Parsons has so clearly pointed out to you this morning. Each step by which the products of the soil, the forest, and the air are converted into commodities of everyday life, depends upon research chemists and engineers. Materials that were formerly cast aside as waste are now being utilized. The productive capacity of the nation is greatly increased. Industry is beginning to appreciate the value of the research man and is applying his results in industry; the close association of these research men with chief executives has changed their point of view and their vision.

Better tools mean better work, and better work means a broader vision. This broader viewpoint has come to realize that the systematic development of our natural sciences will bring to light still greater things. Thus is evolved our great research laboratories and institutions. It has been estimated that the contributions of the research laboratories in America at the present time is creating a half billion of dollars a year in new wealth. These figures, together with other data, are demonstrating to American manufacturers that research is actually an investment.

Industrial research requires a peculiar type of executive, just as the gas business requires men trained in the fundamentals of the business. However, you cannot separate your gas business from research, because your business is developing on a scientific basis and depends upon the two fundamentals, chemistry and physics. Therefore, you cannot help but have some real confidence in these sciences because your very existence depends upon them and your future development upon the expansion of these two sciences.

It will be of interest, as Mr. Parsons has indicated so broadly, in the various contributions of science, to briefly point out a little more specifically what has been accomplished in other industries. One subject that he spoke about was the depletion of our known storehouses of energy. The rapid progress of the present, so alarmists state, is consuming its capital of resources; the world is being impoverished and posterity embarrassed by the enormous consumption of our fuels, coal and petroleum. However, to the scientist this does not give nearly so much concern. We feel that we will not long be handicapped because of our knowledge already gained regarding energy changes of reacting chemicals, and also the possibility of obtaining our motive fuel from sources not now utilized, and we are quite certain that these will be developed long before our present sources are exhausted. Chemistry leads the way and it is neither wasteful nor unmindful of tomorrow.

The growing of an increasing quantity of motor fuels—just as we grow our food fuels—is not nearly as impracticable as it seems. Take, for instance, the production of alcohol. A large quantity is being produced at the present time. The growing plant obtains its energy from the sunlight and stores its energy. This plant is cut down, soaked in water and by the added agency of a yeast cell converts its starch to sugar and then to alcohol. The energy formerly bound by the plant is now in the alcohol and is ready for use.

In this connection we also feel, as Mr. Parsons mentioned, that probably the greatest sources of our energy are going to come from the sources of the inner

atom. There are great possibilities in this particular field. One of the first great scientific achievements was the discovery of fire. Out of fire came iron. It was probably the master creation of the chemistry of the past. Today is the age of steel. How many of you realize that the value of iron lies in its versatility. It is a dozen metals in one. It can be made hard or soft, brittle or malleable, tough or pliant, magnetic or non-magnetic, and more or less conductive of electricity—all by slight changes of composition or differences of treatment, the result of careful but protracted scientific investigation. Other alloys, kindred to iron, are just waiting for the cooperative forces of the scientists in order to lift them to a wider sphere of usefulness.

This field might not prove of interest to the average individual. Just as in England, "After Waterloo all good Englishmen planted acorns so that Britannia might ever rule the waves and never lack for sturdy oaks wherewith to build her battleships. It was an idea consummated in pure loyalty, but it bespoke no real vision. For the Englishman builds his battleships today with bands of steel, and his oaks are only fashioned for his coffin." Research requires vision. It gives you a new point of view in your particular industry, and is absolutely essential for the advancement of our civilization and to hold our own in any particular industry.

In this particular connection, it is also important to realize that that great airship which landed here yesterday, the ZR-3, would not have been possible of construction five years ago. The development of the airplane has brought forth an entirely new industry to this country, a new industrial product, magnesium metal. It is stronger and lighter than aluminum, and it is absolutely essential for the construction of light machinable alloys, of which that large dirigible is constructed. As I say, research requires vision. It may be expensive, but wisely directed it actually pays in dollars and cents, and the whole world is benefited.

The problems so far cited have been more or less complex. Let us turn to the more simple things in life and see what science has accomplished. Food technology is a chemical problem. Bread is one of our most common food products. It has come down through the generations and seems to offer little opportunity for research work. Yet, science today is saving American bakers thousands of dollars—forty thousand dollars a day, it is estimated, through the discovery of just one product, "Arkady Yeast Food." I do not know how many million barrels of flour are used throughout the world in the course of the year, but it is very impressive to note that this particular discovery enables a baker to manufacture 12 pounds more bread per barrel of flour, saves twenty per cent of the sugar content of the bread, saves one-half of the yeast content, and produces a bread better in quality, flavor, texture and uniformity.

This little discovery depends upon the addition of small quantities of mineral salts to the dough, which gives the yeast an added food for its growth and produces a better product for human consumption. American bakers have been keen for the results of the researches accomplished in their field, and they now maintain a well established research laboratory in Chicago to further study such problems.

Another contribution in the field of bread technology takes us into another field in which the chemist has taken cotton-seed oil and made it an odorless and tasteless product and removed it from the soap kettle and placed it in the edible class. The hydrogenation process enables us to produce a vegetable shortening

agent which is now used extensively in cooking, in salad dressings and the like, so that it is utilizing 70 per cent of the cotton-seed oil production.

You can best appreciate the value of this contribution when you stop to realize that just a few years ago the cotton-seed from which this oil is obtained was either used as a fertilizer or thrown away. This contribution has added two hundred million dollars in value to the cotton crop each year.

This takes us up to another important industry; the need of fertilizers for the cotton fields. The discovery of the deposits of phosphate in the south has been a basis for building up our fertilizer industry. Agriculture still remains the world's most important industry, and due to the necessity for conservation the fertilizer industry has come to be one of the largest chemical industries.

To show you the value of the so-called professor working in his laboratory, when Cavendish 130 years ago read a paper before the Royal Society in London describing the formation of nitric acid by the passing of an electric spark through the air, little did anyone realize that that particular process of fixation of atmospheric nitrogen might in the hands of the enemy one day nearly defeat the world. That gives us some idea of the value of research work.

This brief resume brings us up to an industry that is more closely related to your own, namely the coal tar by-product industry. The great wastes formerly permitted in this field are now being checked and it has made the basis of our modern organic chemical industry; it has also made it possible for us to be independent in our dye industry of foreign fields. This black, sticky, evil-smelling tar has been made to minister to the wants of mankind and to his comforts, and is probably one of the most brilliant chapters in all the romance of scientific development. It is a basis for all of our modern drugs, our deadliest poisons, our delicate perfumes, our dyes of every hue of the rainbow, our most deadly explosives, and photographic materials. Chemists by working with these materials have been able to produce in their laboratories bodies identical in composition and in properties with natural substances of vegetable and animal origin. Some of those of vegetable origin which are outstanding are indigo, nicotine, and camphor. Of those of animal origin, which are numerous, could be stated adrenaline, the active principle of the suprarenal gland.

It is interesting if you go back through the development of these products. Take adrenaline, which is a very valuable medicinal product used every day now by physicians throughout the world, it was first discovered in the small glands of the toad. It was isolated and its constitution was determined. It was later manufactured from the glands of the sheep. It was further studied in the glands of the whale, and it has now been prepared synthetically in the chemical laboratory from coal-tar derivatives.

Coming to the more practical things, during the period of the war toluene was in great demand, and toluene recovery apparatus was put into operation wherever it was possible. After the signing of the Armistice the demand for toluene abruptly ceased, and it was no longer profitable to continue the recovery of this material. The Koppers Company immediately started to do research work to see what use could be made of that apparatus. They have developed a new process for the purification of gas, which is going to have great value in the gas industry, and it enabled the use of a large part of this former toluene apparatus.

In the purification of gas, it necessarily

means the removing of sulphur compounds. They are not content with merely the removal of the sulphur but they are collecting the sulphur and are going to utilize it. This sulphur is made the basis of the manufacture of sulfuric acid, and can be used as a by-product in industry for the production of ammonium sulfate. This particular industry offers innumerable opportunities for research work because whenever we discover and utilize one particular by-product we have hundreds of other by-products as a result of that particular investigation which require further investigation and utilization.

Take the recovery of benzene, which is now practically in operation in every by-product and coke plant, and in the process of recovery there are found a number of by-products, oils, tar and residues, for which uses must be found. These have been studied and we have developed such products as turpentine substitutes, linseed oil substitutes, disinfectants, wood preservatives, paints, varnishes, etc., and they still offer great opportunities.

You take any industry that has a scientific background, they are not content to let anything pass by. Take, for instance, the Koppers Company—outside of its work in the field of coke and by-products, it is a large engineering concern. In one year they use something like 250,000 yards of blue-prints or enough to make a strip of blue-print paper 40 in. wide and 143 miles long—that is, long enough to reach from New York to Albany. They started out to investigate better blue-print chemicals, and they developed a combination of chemicals that was superior to anything on the market and this has been in successful use by the company for several years.

One of the things that the Koppers Company is interested in is coke itself. Many years ago the coke made in the wasteful beehive oven was preferred by the average blast-furnace man. Now it is generally recognized in American practice that by-product coke gives superior results. This is not due to a mere change of attitude on the part of the blast-furnace men, but to an actual improvement in the by-product coke itself, and the work is still going on in this field. Whenever we open up new coal fields, it requires very careful systematic investigation to find out just exactly how to use that particular coal in order to get the best results.

There are two other fuels that Mr Parsons emphasized, that is, our petroleum and natural gas. I wonder how many of you are awake to the situation as to what is going on in those particular fields today. Do you realize that whenever we meet a condition where the products become of more value, it opens up new possibilities for the utilization of these particular products? I can state today that there has been spent in the last two years several million dollars in plant equipment for the utilization of natural gas in an entirely different way. It is to be made the basis of a new industry. It gave us an opportunity, with the higher prices of natural gas, to utilize it for more valuable purposes. It is exactly the direction that the chemist is taking today in his laboratory in the study of petroleum products. We do not intend to use these higher priced products, the scarcer products, for the more common uses. The chemist is protecting you whether or not you yourself are interested in trying to develop new sources of materials to take the place of our natural gas and petroleum. We are working in the fields of shale oil, in lignite, in better methods of carbonization of coal, in methods of trying to treat lower grades of coal. So that the chemist in a great many instances is saving industries where they themselves

are not warranted to be saved because they have not taken the proper interest in protecting their own particular industry.

It has been my pleasure to have been associated with a great many associations of industry, and I want to say that when any particular association really begins to appreciate the value of research to that particular industry and they begin to cooperate and work wholeheartedly together for the best interest of the industry as a whole, they are an outstanding, really progressive association. You look through the records of the associations at the present time, and you will find the ones that are doing the greatest good and have the closest unity and are pulling together in advancing the industry are the ones that are supporting research, supporting it as a group, working on the fundamental problems, taking care to see that they are going to have a supply of their raw materials for the future.

As just one particular instance that I might give you of a condition that arises, take the yeast industry. Back in 1912 the yeast companies started in on research work. At that particular time they did not have any idea that prohibition was going to come in 1918. The whole source of the basic materials for the yeast business came from the brewer. They did not realize that this source of raw material would be taken away with practically one stroke of the pen, but they were prepared. They were enabled to make this yeast out of molasses and make a better yeast at a lower cost and a better quality than they were formerly by the old process, and it was only a question of introducing the new method without changing hardly any conditions in the plant to save that particular industry.

That is a thing you have to look for in the future. You have your supplies of raw material. We are working with them, working with them independently, but it is certainly much better that the scientists and the associations as a group get together and study their fundamental problems in order to protect the industries for the future.

The Council of the Institution of Gas Engineers have decided to hold the Annual Meeting of the Institution next year in London, and it will take place in the Great Hall of the Institution of Civil Engineers, which has been lent for the purpose by the Council of that Body.

Associations Affiliated with A. G. A.

Canadian Gas Association
Date of affiliation—Mar. 25, 1919.
Pres.—E. R. Hamilton, Nova Scotia Tramways & Power Co., Halifax, N. S.
Sec.-Tr.—G. W. Allen, 7 Astley Avenue, Toronto.
Conv., Quebec, Que., July 15 and 16, 1925.

Empire State Gas and Electric Association
Date of Affiliation—Nov. 21, 1919.
Pres.—M. S. Sloan, Brooklyn Edison Co., Brooklyn, N. Y.
Chairman Gas Section—F. F. Ingwall, Binghampton Gas Works, Binghampton, N. Y.
Sec.—C. H. B. Chapin, Grand Central Terminal, New York, N. Y.
Annual Meeting, 1925.

Illinois Gas Association
Date of Affiliation—Mar. 19, 1919.
Pres.—J. G. Learned, Public Service Co. of Northern Illinois, Chicago, Ill.
Sec.-Treas.—R. V. Prather, 305 Illinois Mine Workers Bldg., Springfield, Ill.
Conv., Chicago, Ill., March 18, 19, 1925.

Indiana Gas Association
Date of Affiliation—April 24, 1919.
Pres.—G. M. Johnson, Northern Indiana Gas & Electric Co., South Bend Ind.
Sec.-Tr.—E. J. Burke, Citizens Gas Co., Indianapolis, Ind.
Conv., 1925.

Iowa District Gas Association
Date of Affiliation—May 21, 1919.
Pres.—H. J. Carson, Cedar Rapids Gas Co., Cedar Rapids, Ia.
Sec.-Tr.—H. R. Sterrett, 551 Seventh St., Des Moines, Ia.
Conv., 1925.

Michigan Gas Association
Date of Affiliation—Sept. 18, 1919.
Pres.—Chester Grey, Lansing Fuel & Gas Co., Lansing, Mich.
Sec.-Tr.—A. G. Schroeder, Grand Rapids Gas Light Co., Grand Rapids, Mich.
Conv., 1925.

Missouri Association of Public Utilities
Pres.—C. L. Proctor, Empire District Electric Co., Joplin, Mo.
Sec.-Tr.—F. D. Beardslee, 315 N. 12th. St., St. Louis, Mo.
Conv., 1925.

New England Association of Gas Engineers
Date of Affiliation—Feb. 19, 1919.
Pres.—C. R. Prichard, Lowell Gas Light Co., Lowell, Mass.
Sec.-Tr.—J. L. Tudbury, 247 Essex St., Salem, Mass.
Conv., Biltmore Hotel, Providence, R. I., Feb. 18, 19, 1925.

Gas Sales Association of New England
Date of Affiliation—Oct. 1, 1919.
Gov.—J. J. Quinn, Citizens Gas Co., Quincy, Mass.
Sec.—J. H. Sumner, 719 Massachusetts Ave., Cambridge, Mass.
Annual Meeting, 1925.

New Jersey Gas Association
Date of Affiliation—April 25, 1919.
Pres.—Raymond W. Lee, Cumberland County Gas Co., Millville, N. J.
Sec.-Tr.—R. A. Koehler, Public Service Gas Co., Newark, N. J.
Meeting, Jersey City, N. J., Jan. 23, 1925.

Pacific Coast Gas Association
Date of Affiliation—Sept. 18, 1919.
Pres.—E. L. Hall, Portland Gas & Coke Co., Portland, Ore.
Exec. Sec.—Clifford Johnstone, 619 Wells Fargo Bldg., San Francisco, Calif.
Conv., Portland, Ore., 1925.

Pennsylvania Gas Association
Date of Affiliation—April 10, 1919.
Pres.—John A. Frick, Allentown-Bethlehem Gas Co., Allentown, Pa.
Sec.-Tr.—Geo. L. Cullen, Harrisburg Gas Co., Harrisburg, Pa.
Conv., 1925.

Southern Gas Association
Date of Affiliation—May 20, 1919.
Pres.—W. H. Taylor, Georgia Railway & Power Co., Atlanta, Ga.
Sec.-Tr.—J. P. Connolly, 141 Meeting St., Charleston, S. C.
Conv., Wilmington, N. C. June 9-11, 1925.

Southwestern Public Service Association
Date of Affiliation—September 26, 1923.
Pres.—G. W. Fry, West Texas Utilities Co., Abilene, Texas.
Chairman Gas Section—F. C. Armbruster, Southwestern Gas & Elec. Co., Shreveport, La.
Sec.—E. N. Willis, 403 Slaughter Bldg., Dallas, Texas.
Conv., Houston, Texas, May 19-22, 1925.

Wisconsin Utilities Association
Date of Affiliation—March 25, 1919.
Pres.—G. C. Neff, Wisconsin Power & Light Co., Madison, Wis.
Chairman Gas Section—J. G. Felton, Northern States Power Co., La Crosse, Wis.
Exec.-Sec.—J. N. Cadby, 445 Washington Bldg., Madison, Wis.
Conv., 1925.

Geographic Divisions

Eastern States Gas Conference
Date of Formation—April 11, 1923.
Pres.—P. S. Young, Public Service Gas Co., Newark, N. J.
Sec.-Tr.—R. A. Koehler, Public Service Gas Co., Newark, N. J.
Conv., Newark, N. J., April 22 and 23, 1925.

Employment Bureau

SERVICES REQUIRED

WATER HEATER SALESMAN WANTED—A large gas company needs several good water heater salesmen to work on commission basis in Western Pennsylvania. Exceptionally good territory.
Key No. 026.

WANTED—Two experienced salesmen, to specialize on the sale of gas boilers for house heating and industrial uses, by a gas company desirous of increasing its present gas boiler load. Give details of experience and results obtained.—Address A. G. A.
Key No. 039.

APPLIANCE SALESMEN—Calling on Gas Companies to sell tank water heaters as a side line on commission basis. State territory, references and experience. Address A. G. A.
Key No. 042.

WANTED—Gas main laying foreman for gas company in vicinity of New York. Address A. G. A.
Key No. 044.

WANTED—A Gas Company desires the services of a technically trained man, having had experience in main and service work; college graduate preferred. Address A. G. A.
Key No. 045.

WANTED—An experienced man to take charge of gas department in a small New England city. It is a water gas plant with annual sales of about 31,000,000 cu. ft. In writing state fully your training, experience and salary expected. Address A. G. A.
Key No. 046.

SERVICES REQUIRED—Application manufacturer wanting three salesmen for next year; one for Eastern states and two for the Middle Western states. Men with water heater and gas range experience desired. Address A. G. A.
Key No. 047.

WANTED—Bookkeeper wanted for bookkeeping and other clerical work in general office in village of 4,000. School town in Northern New York. Address: St. Lawrence County Utilities, Inc., Potsdam, N. Y.
Key No. 048.

WANTED—GAS RANGE SALESMEN. Representatives wanted for the Eastern States. Address A. G. A.
Key No. 050.

SERVICES OFFERED

WANTED—Position of responsibility as Manager or Industrial Fuel Engineer—18 years' varied experience in the gas business. References and service record furnished. Address A. G. A.
Key No. 142.

AVAILABLE—Man of executive ability, experienced in all phases of the gas business and sales and advertising work, including agency work on National accounts. Capable of creating, planning and following through all forms of advertising. Prefer locating in West or South Atlantic states. Minimum salary of $4,000. Address A. G. A.
Key No. 167.

WANTED—Am open for position as appliance salesman with Gas Company or Appliance Manufacturer. Have had twelve years' experience selling ranges, water heaters, room heaters and illuminating devices. Am at present employed in this capacity by a large corporation, but desire to make a change. Can furnish references from present and past employers. Married. Can report on reasonable notice. Address A. G. A.
Key No. 179.

I have had many years' experience in design, construction and operation of coal and water gas plants of from 42,000 to 6,000,000 daily capacity. Am now employed but wish to make a change to better my position. I desire a place as Manager, Assistant Manager or Engineer. I will go anywhere. Best of references furnished. Address A. G. A.
Key No. 183.

GAS ENGINEER—Eighteen years' experience in design, construction and operation of gas plants, all departments, manufacture and distribution, also electrical experience in combination plants desires position of responsibility with progressive company. Past six years chief engineer with large gas company. Address A. G. A.
Key No. 171.

ENG-SUPT. of one of the largest gas plants in the country would consider change. Desires to locate with company in which opportunities for future advancement are better than in present position. Is a married man. Has technical University training. No particular preference as to location. Address A. G. A.
Key No. 159.

WANTED—A position as General Manager or Engineer of Gas Property. Have had experience and can produce results in either large or small properties. Can give exceptional references on past record. Address A. G. A.
Key No. 175.

EXECUTIVE, with fifteen years' experience in coke oven practice on plants manufacturing surplus gas for city consumption, desires connection with growing public utility either as executive or position leading to same. College graduate, good personality, married. Available on reasonable notice. Address A. G. A.
Key No. 172.

GAS ENGINEER, 40, with thorough training (17 years) in the gas business and real executive ability, wishes to connect up with a live concern in any capacity where technical and commercial ability will count. At present engaged, but could be available on two months' notice. Address A. G. A.
Key No. 176.

WANTED—Executive position by young man with eighteen years' (18) experience in all branches of gas business. Eight years (8) as manager. Past four years, vice-president and general manager of gas company with nearly 10,000 meters. Mechanical engineer. Expect to voluntarily place myself on the market about August 15, 1924. Will accept position as manager of company with 7,000 to 10,000 meters, or assistant manager and engineer, with larger company. Married man. Replies must be strictly confidential. Address A. G. A.
Key No. 177.

ENGINEER STATISTICIAN—10 years' experience in the valuation and operation of mines, industrial plants, and public utilities in connection with the maintenance, statistical, legal and accounting phases of business, now seeks permanent engagement with reputable firm. Address A. G. A.
Key No. 183.

WANTED—Position as Manager of Gas Company. Coal or water gas. College trained. Have served in works, street and office. Doubled meters and doubled output in last position. Address A. G. A.
Key No. 184.

WANTED—An Executive Position in Commercial Department. Young man with 14 years' experience and a thorough knowledge of the gas business. Salary discretionary. Address A. G. A.
Key No. 186.

WANTED—Position of assistant superintendent or superintendent of water gas plant. A technical graduate, 31 years of age. Have had nine years' operating experience with large gas company, having served as assistant superintendent in their three largest plants. Particularly adapted and trained in obtaining results. Now available and best of references can be furnished. Address A. G. A.
Key No. 187.

WANTED—Executive position with more promising future by man with a broad practical experience in the manufacture and distribution of gas and electricity; also in the distribution of natural gas. Have operated successfully as executive of combined gas and electric property for over nineteen years. Services available upon reasonable notice to present employer. Address A. G. A.
Key No. 188.

WANTED—Salesman M. E. or mechanic, 15 years' successful sales record. 10 years (1) large gas company, 5 years selling all kinds of gas appliances, 5 years same company specializing in the sale of automatic gas water heaters and in charge of automatic water heater division. 5 years with manufacturers of gas-fired boilers as representative to gas company trade and retail trade. Can figure radiation for buildings from heat transmission, lay out and supervise heating jobs. Will consider position with a manufacturer to cover New England gas companies or a progressive gas company. Road experience. Address A. G. A.
Key No. 189.

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